THE BUILDER

INCORPORATING

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THE PART OF THE QUANTITY SURVEYOR

THE Report of the Quantity Surveyors' Committee of the Chartered Surveyors' Institution, which we published in our issue for December 4, brings out the difficulties under which all those must labour who are beginning to plan for the future.

In the midst of total war, national unity, essential to its successful end, is achieved only by the suspense of Party politics; and yet, though we have tended to regard these as an amiable phenomenon in modern civilised society, we know very well that political conviction runs deep, and that if an attempt were made now to settle in advance the exact design of post-war society, the singleness of aim which now unites all Parties would be immediately prejudiced, and possibly hopelessly destroyed.

Now the planner need not be a Party man, in the generally accepted meaning of the term; in fact, the most successful committees which have worked upon social problems have been those in which all shades of opinion have been represented. But he is certain to come up against the political frontiers whenever he attempts to bring a system of order into the confused state which is bound to exist when a nation organised only for waging war finds itself faced with the problems of peace. He may be firmly determined to help any social system to work, whichever way he may previously have exercised his vote, but he will know that there will be large bodies of sincere men already convinced that society will work only under the greatest measure possible of unrestricted private enterprise, and others equally determined that society can never be perfect until the State has acquired complete control over all its activities. Between these there will be others holding the views of various degrees of compromise, but each firmly resolved as to the point at which the individual shall bow to the State.

It would be a misrepresentation of events to describe this condition as a vicious circle, since no honourable price is too much to pay for the comradeship of a nation in arms, but it is evident that there is this almost insuperable difficulty facing all those who are attempting to think ahead in any practical degree of detail.

The bearing of these conditions upon the quantity surveyor is obvious, for competitive tendering has so far created one of the most important, if not the most important, of his functions. Now as competitive tendering as a system of distributing work is the embodiment of individualism, it is clear that there is at least one political question involved with the technicalities which are the real concern of a professional body like the Chartered Surveyors' Institution. A superficial view might be that if the country decided upon any wide measure of State control and administration in the building trade, the future of the quantity surveyor as a private and independent practitioner would be adversely affected. To some, to whom the superficial is paramount, it might appear that the Committee's vote in favour of the principle of competitive tendering had, in fact, a political reason, and showed a disinclination within the profession to work any system which did not leave individual enterprise free.

We do not believe that such a conclusion can fairly be drawn from the Report to which we have referred, for it covers a very much wider field. It brings out the real facts upon which the profession of quantity surveying is based. These are that there is, and always must be, in any properly organised society, a respect paid to the scientific relationship between achievement and cost, whether this latter is expressed in terms of known currency or in the real values of man-hours; and that the power to arrive at this relationship can be acquired only by highly specialised and skilful training in which ordinary facility with figures must be reinforced by an intimate understanding of the whole process of building and the ways of craftsmen. In this position, the quantity surveyor must always hold a unique and privileged appointment, and it is evident from the Report that the Committee was well aware of this throughout its deliberations. Accordingly, we can see no possible motive for any political bias in favour of this or that social system, or system of working, but rather a readiness to meet any of the conditions which may arise as an inevitable result of total war, and we commend a similar attitude of mind to all those who have set themselves the difficult task of planning for a future shrouded in the mists of uncertainty.

As a natural corollary to the foregoing, we find the Committee equally emphatic in its attitude to the "Cost-plus" system. In this we cannot help feeling that this system receives less than its fair respect, for in theory and merit it is, of course, the only system that can ensure that building work shall be paid for in proper relation to its cost. That it has failed to do so so often, and particularly during this war, is not because it is inherently defective, but because there has been lacking the spirit of service, without which no system can work perfectly. In an imperfect world, this system is perhaps specially susceptible to misconduct, but with, let us say, a "stand-still" top limit for profit, set at a fair datum for each job, much of its defects might be eliminated, and it is obvious that the quantity surveyor would play a vital part in determining in advance the level at which profit should cease. Whether or not such a remedy would work, it may be regretted that this system has been "written off" without tribute to the virtues which it does contain.

In the light of the Beveridge Report, which we have hardly yet had time to consider from all angles, a vision of a world in which political shades of opinion may be less urgently influenced by the hardships of a competitive system may make it possible for more precise planning for the future, and, if this proves to be the case, there will be further opportunity for this and other Committees to sit and clarify their schemes.

NOTES AND NEWS

Gifts to the National Trust.

LORD ASTOR has made over his house and estate at Cliveden, Bucks, to the National Trust. The house was designed in 1850 by Sir Charles Barry.

The executors of the late Mrs. Ronald Greville announce that by the terms of her will she has bequeathed her Polesden Lacey estate of about 1,000 acres, with certain pictures, furniture, etc., to the National Trust for Places of Historic Interest or Natural Beauty. Mrs. Greville expressed a wish that in the future an art gallery should be formed at Polesden Lacey to house her collection. Polesden Lacey lies north of Ranmore Common, Surrey, in beautiful wooded country, and is traversed by a number of paths very popular with London ramblers. At one time it belonged to Richard Brinsley Sheridan, though the present house dates only from 1820.

Replanning of Hull.

SIR EDWIN LUTYENS, P.R.A., and Professor Patrick Abercrombie have accepted the invitation of the Hull Corporation Reconstruction Committee to act as advisers on the replanning of Hull.

District Heating.

THE Association for Planning and Regional Reconstruction considered, at a meeting on November 10, the subject of District Heating. Mr. I. Dryden summarised a report in which he tried: (1) To state and assess the quantitative arguments for and against district heating; (2) to consider from first principles the technical questions of pipe sizes, pressure loss and heat loss in the distribution system, with the object of determining the relation of thermal efficiency to district size and population density, and so of assessing roughly the limits of practicability of district heating under British conditions; and (3) to compare, very approximately, the price at which electricity and heat could be produced at a combined station with the cost of producing electricity alone, and to determine the relation of distribution cost to district size and population density.

In order to give the basis for (2) and (3) an ideal system was postulated; the general conclusions drawn were expected to apply roughly to actual cases. The principal conclusions reached were: Overall efficiency at a combined station would be high at the expense of power production efficiency, and the load factor would be higher than at power stations. These advantages might be partially offset by other considerations. Cost and thermal efficiency are determining factors in deciding the applicability of district heating. Thermal efficiency decreases and distribution costs increase considerably as population density decreases, but they vary little with the area of supply. For steam supply the population density should exceed 50 per acre, for water supply 5-10 per acre. In systems up to 12 miles in diameter (seven per acre) thermal efficiencies considerably exceeding 50 per cent. could be obtained, and heat at not more than 10d. per net therm (6d. at 50 per acre) could be supplied. Coal fires cost about 6d., gas and electricity at least 1s. 3d. per net therm. Electricity could be supplied from combined stations at, perhaps, 0.35d. per unit on the consumer's premises (the cheapest now is about ½d.).

Excavation costs form a considerable proportion of the total cost of supply. The last item was purposely over-estimated owing to lack of exact figures, and it was criticised with justification by Mr. O. Arup in the discussion. It would seem that, in consequence, district heating may prove cheaper even than coal at pre-war prices. Mr. A. E. Margolis made valuable contributions to the discussion from his wide and practical experience of the subject. He pointed out that although less severe winters in Britain made conditions less favourable, this was more than compensated by the increased duration of the heating period which increased the load factor. Mr. F. J. Samuely urged medical investigation of the relative merits of radiant and convective heating.

Advisory Service on Welding.

THE Ministry of Supply, in conjunction with the Institute of Welding, have arranged a series of nine lectures on "Welded Structures," by Messrs. H. St. G. Gardner, B.Sc.(Eng.), A.M.I.E.E., M.Inst.W.; H. V. Hill, M.Sc., A.M.Inst.C.E., M.Inst.W.; H. Martin, M.Inst.Metals, M.Inst.W.; and K. K. Doherty, M.Inst.W., at Curzon-street Cinema, London, W.1, on the following dates: December 28, 29; January 1, 4, 5, 7, 11, 12 and 14. Admission is by ticket only, from Institute of Welding, 2, Buckingham Palace-gardens, London, S.W.1.

Home Timber Production.

THE Ministry of Supply announce that as from January 1, 1943, the organisation of trade production of home timber in England and Wales will be based on the Division of the Home Timber Production Department instead of the areas of Timber Control. Full details of the scheme will be given in our next issue.

Professional Announcement.

MESSRS. LIONEL H. FEWSTER AND PARTNERS have now returned to their office at 22, Conduit-street, London, W.1. Telephone: Mayfair 3111-2.

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LIVERPOOL CATHEDRAL DESIGN

THE current issue of Liverpool Cathedral Committee's "Quarterly Bulletin" discloses Sir Giles Scott's intentions in planning the interior of the west end of the Cathedral. One day, when the visitor enters the building from the west door of the as yet unbuilt nave, he will see a central organ resting on the low semi-circular stone arch spanning the east end of the nave. On the side of the arch, and leading up to the wooden organ gallery, will be flights of stone steps with graceful wooden balustrades, and through the arch will be seen in the far distance the reredos and east window.

The floor of the nave is several feet below that of the central space, to which it is joined by two flights of shallow steps, while from the aisles similar flights descend to the nave floor. The impressive gradual rise of levels from west to east helps to solve the difficult problem created by the fact that at the west end the level of the ground falls away steeply and is considerably below the existing floor level.

The outstanding event of the year has been the completion by the architect of his design for the first bay of the nave. The Committee states that several years must elapse before it can even consider embarking on another section of the building. Until then the design must be regarded as provisional; but it represents what in the mature judgment of the architect is the best treatment of the junction of the nave and the central space. When completed, the total interior length of the cathedral from the west door to the reredos is to be 482 ft.—"a greater length than that of any existing cathedral."

Giving some of the reasons for Sir Giles Scott's decision to make a division at the east end of the nave, the Committee says that the organ screen, while giving a resting point for the eye in the middle distance, will not close the vista; the spectator at the west door will see the altar and the east window beyond the screen. Apart from æsthetic considerations, there is a practical need for the organ arch in that position, directly resulting from the dimensions of the interior.

COMPETITION NEWS

Ilkley Town Planning Competition.

The following awards have been made in the Architectural and Town Planning Competition for the Castle Hill site and surroundings, Ilkley, Yorkshire:—

First (50 gns.): Scheme No. 50, Capt. Hubert Bennett, F.R.I.B.A., 3, The Horseshoe, Dringhouses, York; second (30 gns.): Scheme No. 41, Mr. H. E. Burton, 247b, Hagley-road, Edgbaston, Birmingham, 16; third (20 gns.): Scheme No. 53, Lieut. Frank Booth, A.R.I.B.A., Middlethorpe Lodge, Dringhouses, York.

Commended: Scheme No. 36, Mr. E. J. Harrison, B.Arch., A.R.I.B.A., 35, China-street, Lancaster; Scheme No. 45, Messrs. G. Grenfell Baines, A.R.I.B.A., John A. Ashworth, A.R.I.B.A., A.M.T.P.I., and T. Mellor, A.R.I.B.A., A.M.T.P.I., 12-24, Guildhall-street, Preston; and Scheme No. 70, Messrs. A. J. Steel, A.R.I.B.A., and L. Whitaker, A.R.I.B.A., A.M.T.P.I., "Roseway," Molescroft, Beverley.

The designs will shortly be seen in London.

Orville Wright Honoured.

Mr. Orville Wright, of Dayton, Ohio, the pioneer of flying (with his brother Wilbur), has been elected an Honorary Member of the Institution of Mechanical Engineers.

THE ROYAL GOLD MEDALLIST

PROFESSOR C. H. REILLY

On the recommendation of the Royal Institute of British Architects, His Majesty the King has approved of the award of the Royal Gold Medal for Architecture, 1943, to Professor Charles Herbert Reilly, O.B.E., Hon. LL.D. (Liverpool), M.A. (Cantab.), F.R.I.B.A., Emeritus Professor of Architecture in the University of Liverpool.

Professor Reilly is best known for his work as an architectural educationist and for his distinguished tenure of the Roscoe Chair of Architecture at Liverpool University, which under his leadership became one of the most famous architectural schools in the world. Professor Reilly, who previously had been lecturer in architecture at King's College, London, was given the Liverpool Chair of Architecture in 1904 in succession to Professor F. M. Simpson. He retired from the Liverpool Professorship in 1933, when he was elected Professor Emeritus. During his time in Liverpool the Department of Architecture grew from a school of 20 two-year students to one with about 200 students taking a five-year course. He was chiefly responsible for adding to the University academic institutions the now famous School and Professorship of Civic Design. One of Professor Reilly's chief contributions to architectural training during his time at Liverpool was his encouragement of his students to gain experience in the United States of America, and he succeeded in making arrangements with many distinguished American architects to take Liverpool graduates into their offices.

Professor Reilly was born in 1874, the son of Charles Reilly, F.R.I.B.A., Architect and Surveyor to the Drapers' Company. He was educated at Merchant Taylors' School, where he was head of the modern side at the same time that Dr. Cyril Norwood was head of the classical side. He went to Queens' College, Cambridge, in 1893, with a scholarship, obtaining a first class in the Mechanical Sciences Tripos (Engineering) in 1896. After Cambridge, he entered his father's office for a year, and then moved to the office of John Belcher, F.R.I.B.A., one of the leading architects of his day.

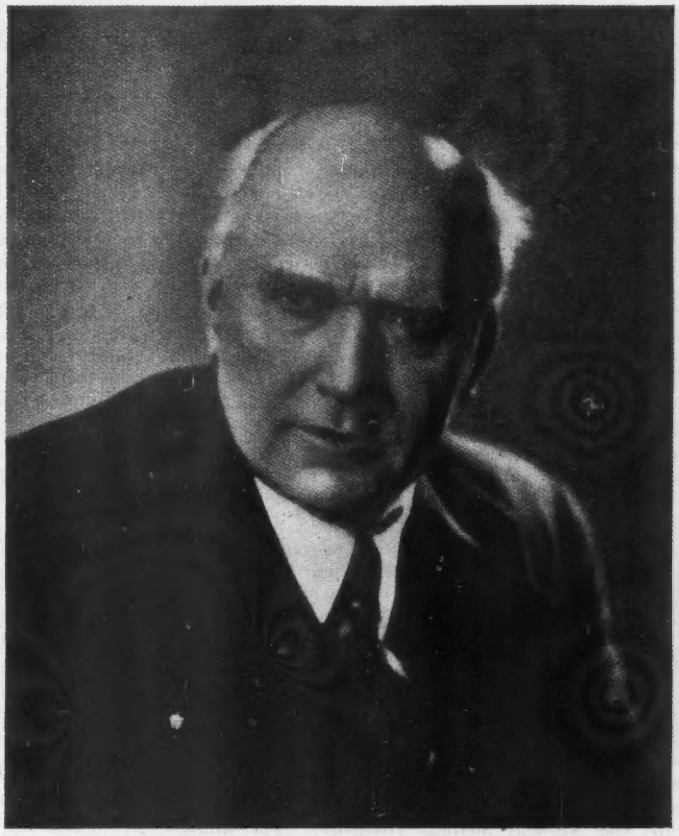
Among his buildings are the Students' Union and Gilmour Hall of Liverpool University; St. Barnabas Church, Dalston; Accrington War Memorial, and various town and country houses, including, in association with Thomas Hastings, of New York, the new Devonshire House, Piccadilly. He submitted the only classical design in the Liverpool Cathedral competition to be commended by the assessors.

Among his literary works is an autobiography, "Scaffolding in the Sky," published in 1938. He has also edited two volumes of selected etchings of Piranesi, and is author of books on the streets and buildings of Liverpool and Manchester, and a monograph on the American architects, McKim, Mead and White. He has contributed extensively to architectural and other periodicals.

Professor Reilly has played a considerable part in the affairs of the R.I.B.A., of which he was Vice-President, 1931-33, and he was a member of the R.I.B.A. Council, 1909-1911, and from 1925 to 1939. He was an original member of the R.I.B.A. Board of Architectural Education, and was a member of the Statutory Board of Architectural Education in 1932 and succeeding years, and has been a member of the Faculty of Architecture of the British School at Rome. He is an Honorary Member of the Town Planning Institute, an Honorary Corresponding Member of the American Institute of Architects, and a Member of the Comité Permanent International des Architectes.

He was one of the founders of the Liverpool Repertory Theatre, and was its first chairman, and is now a vice-chairman of the theatre.

He was awarded the O.B.E. for his work during the 1914-18 war, when he was Senior Inspector for the Liverpool and North Wales munitions area.



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CHARLES HERBERT REILLY, ROYAL GOLD MEDALLIST.

BOOK REVIEW

Village and Town. By S. R. Badmin. A Puffin Picture Book, 9d.

In taking a step outside our usual course, in reviewing a children's picture-book, we are justified by the fact that this one is an introduction, for the very young, to the art of architecture in England. Starting with primitive huts, it carries the story on, by means of vividly coloured illustrations, to the latest phases of modernism. The 32 pages include a great variety of typical buildings, and on one of them is a map showing the location of various building materials with a diagram indicating their treatment and uses.

This book displays a good general knowledge of construction, and it seems hypercritical to point out a few slips which might have been avoided if the author had consulted one of his architect friends. In the buttress diagram on page 7 the lines of thrust are incorrectly drawn; if they were as shown the structure would be unstable. "The Village Church" is neither typical nor a good design. The Elizabethan manor house is about 50 years too early, and the next example cannot be allocated to the seventeenth century except in London and a few other important centres.

These and a few other minor errors must not be allowed to count against the value of this little book in developing interest in building and architecture among the young people it is designed to excite.

H. V. L.

NEW ARCHITECTURE AT OXFORD UNIVERSITY

BY MR. HUBERT WORTHINGTON, O.B.E., M.A., F.R.I.B.A.

OXFORD architecture, in any particular epoch, seems destined to bear the stamp of only a very few designers; often of one, who is the Oxford architect of the period. T. G. Jackson, for instance, is outstanding as the dominant influence in pre-1914 Oxford. It is too early to say whether the present epoch will be remembered as that of only one architect; but Mr. Worthington ("Mr. 'Ubert" to his friends the craftsmen) is undoubtedly a strong candidate for the position. He has style; quite apart from his favourite wavy-topped windows, which are the layman's clue to identifying his work, there is a fine sense of dignity and a quiet originality of conception in his buildings, very markedly in that early masterpiece, the new Science Library, which makes one think of some splendid ship, or of the Cathedral of Albi.

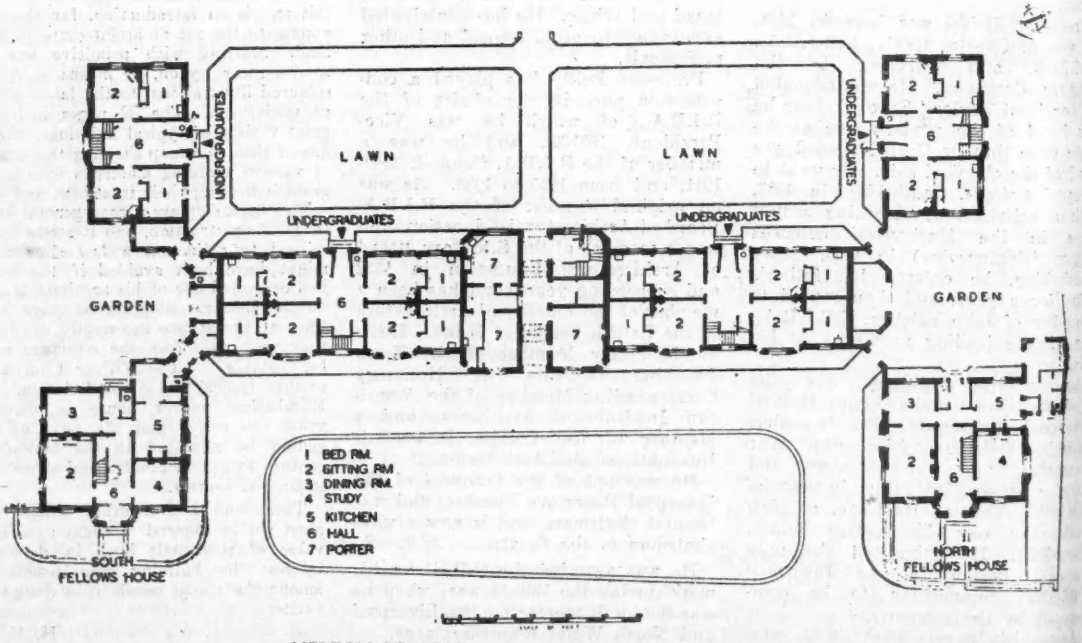
Thus Mr. Michael Holroyd, Fellow of Brasenose College, writing in the "Oxford Magazine" on three new buildings recently completed in Oxford to Mr. Hubert Worthington's designs—the new Library for New College; the Garden Buildings, for Merton College; and a house for Lincoln College in the Turl (designed externally by Mr. Worthington and carried out by Mr. Gilbert T. Gardner). These, of course, are by no means the sum of Mr. Worthington's work at Oxford, which includes the new building for St. Catherine's Society in St. Aldate's; the new wing of the Radcliffe Science Library in South Parks-road; and the conversion of the Radcliffe Observatory into the Nuffield Medical Institute. Yet another building, the Special Library for History and English Language and Literature in Merton-street (which had been built up to the ground-floor level) has been stopped owing to the war. The volume of work thus done in the University city is considerable and the consistently high quality of design evident in Mr. Worthington's work may be seen from the illustrations which accompany this article. These show: (1) the new Garden Buildings at Merton College; (2) the new Council Chamber at the old Bodleian; and (3) renovations at the Radcliffe Camera. The notable Library which he has designed for New College will be illustrated in a future issue.

GARDEN BUILDINGS, MERTON COLLEGE.—Garden Buildings is an important addition to Merton College, built on an independent site, but within easy reach of the main college. It provides 24 undergraduates' sets, a common room, two Fellows' houses and a porter's lodge.

The site was a market garden behind an old wall that bordered on Rose-lane, which leads from the High-street near Magdalen down to Christ Church Meadows. Opposite are the Botanic Gardens. At the back, parallel with Rose-lane, runs the City Wall, supporting the Fellows' Terrace, and behind this is the Fellows' Garden of Merton College, with Merton-street adjacent.

The general layout affords some interesting planning and a great opening up of space. In spite of first appearances it proved an admirable site. A central axis through the archway under the common room block lines with the side gate of the Botanic Gardens on the east and a new archway, made for the purpose of access, in the City Wall on the west. The clearing away of the Rose-lane wall and railings has provided a spacious setting for the long low building, grouped in four subsidiary blocks round a central spine. As will be seen from the plan, it provides a variety of composition. It was important that the buildings should be kept as low as possible so as not to block the view of Magdalen Tower from Merton-street and the Fellows' Terrace. The low-pitched copper roofs helped to satisfy this important consideration.

The foundations, as in the case of the New Library for New College, offered a formidable problem, for they came in the old City ditch and consequently piles nearly



MERTON COLLEGE: PLAN OF GARDEN BUILDINGS.

MERTON COLLEGE : GENERAL VIEW OF ROSE-LANE FRONT, GARDEN BUILDINGS.

twice the height of the building in depth had to be driven over this considerable area. The piles are tied in by reinforced concrete frame foundations on which the walls were built. The walls have Clipsham dressings and Bladon walling with a brick backing. The roofs are of copper. All the internal woodwork in the students' quarters is of oak or teak to save upkeep costs. Each set has a comfortable sitting-room with a bedroom opening off it. Bedrooms have running water and built-in clothes cupboards and a small safe, the size of a brick, concealed in the wall surface. The rooms are full of light, with a pleasant outlook over gardens and trees. Bathrooms and showers are at the first floor level over the entrance lobby. The Oxford traditional staircase principle is both the most economical in planning and the most satisfactory in use. Eight sets are served by a staircase in the main block, four in the lesser wings. The staircases are spacious, well lit and comfortable. The common room, on the centre of the first floor, is 38 by 22 feet, and is lit by three tall and two narrow angular windows, and it has fireplaces at each end. Breakfasts are served here from a small kitchen, lunches and dinners being taken in College.

The Fellows' houses differ in plan to suit aspect and prospect, but they each have an entrance hall, living-room, dining-room and study, and labour-saving kitchen and offices, five bedrooms and two bathrooms, and are intended for the occupation of the younger married Dons with families. The building has a frontage of 285 feet. The window and entrance bays break the straightness of skyline and the staircase windows punctuate the fenestration. The wall is capped by a strong, horizontal moulding. Clipsham dressings in the quoins, doorways and window surrounds, notably those of the common room and staircase windows, with their slightly curved heads, are contrasted with the texture of the Bladon walling, which is again relieved by heraldry set in the rougher surface.

The craftsmanship throughout is of a high order, and the central gates, set in the channelled voussoirs in the archway, are delicate and open, with gilded College mitres in green ironwork. Large expanses of lawn give a pleasant foundation on both sides of the building and flower beds along the length of the main walls give splashes of colour in their season. These elements, combined with the fine trees that front and back the group, give significance to the name of Garden Buildings.

OLD BODLEIAN—NEW COUNCIL CHAMBER.—The Bodleian Library, having now provided itself with Sir Giles Scott's great new building across the Broad for the storage of the millions of existing and unborn volumes, would, had it not been for the war, have completed a great scheme of renovation and rearrangement of the old Library round the original quadrangle. The removal of superfluous books makes possible a great series of open access reading rooms on the first floor, in addition to those on the second floor. The ground floor is to contain the administrative offices and other special rooms. This work has been entrusted to Mr. Hubert Worthington, and the Council chamber, here illustrated, shows a beginning. It has been formed in the south-east corner of the ground floor, in a space that was packed with Victorian bookcases and circular iron staircases and galleries. It is a monumental chamber, 43 feet by 23 feet by 16 feet high. The floor above was riddled with death watch beetle, and a new fireproof one has been put in, and cracked masonry has been restored.

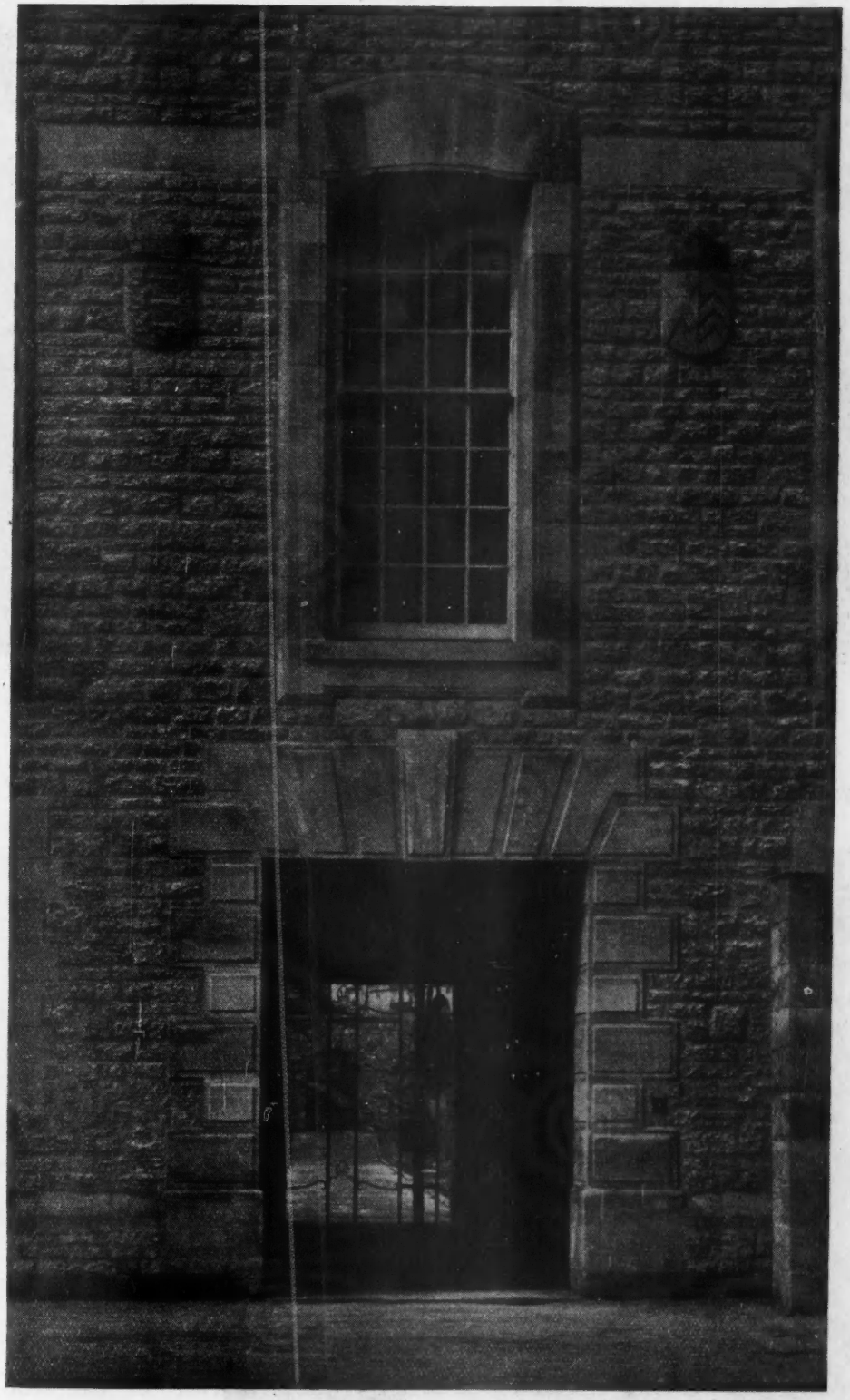
The rooms of the ground floor are entered direct from the quadrangle, but many years ago the south-east staircase was removed and a mezzanine store inserted in this corner tower. An ante-room has been formed here, and a doorway cut through to the Council Chamber is framed in masonry of a contemporary disused doorway that was hidden behind bookcases on the floor above. The Council Chamber is lined with oak panelling con-

MERTON COLLEGE : THE NORTH FELLOWS' HOUSE.

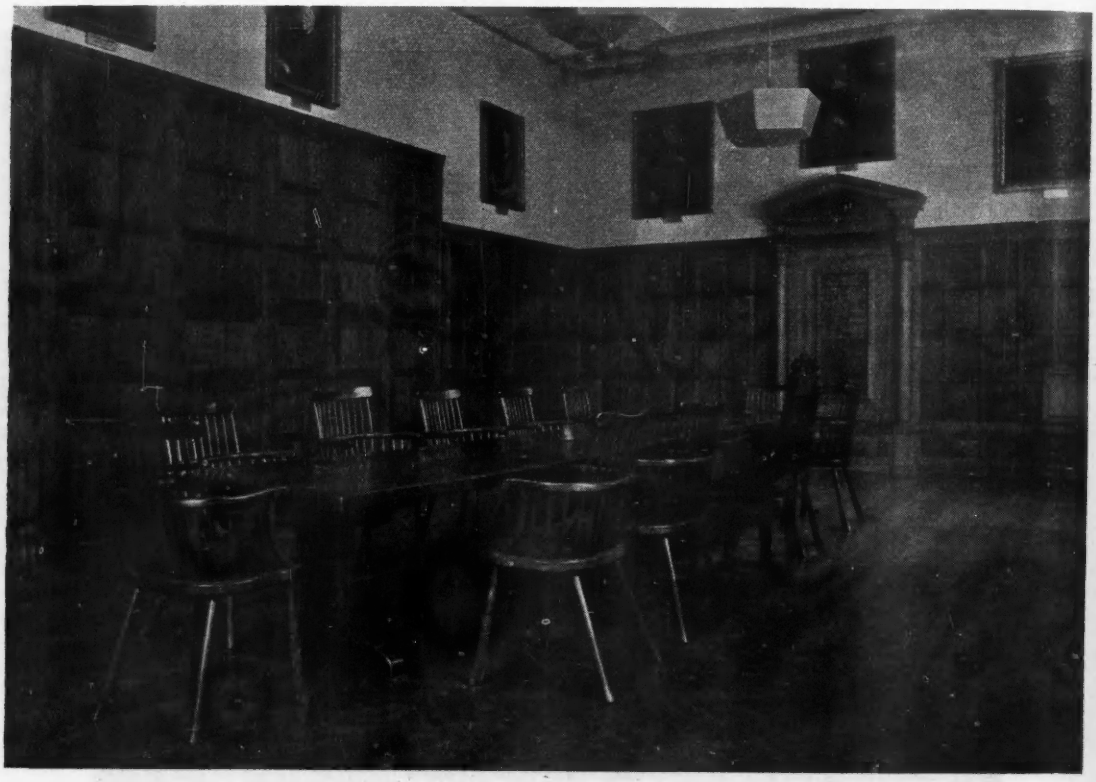
temporary with the building, that was found behind Victorian bookcases, and on the south wall are the Savilian cupboards, which had been placed in the removed mezzanine, to contain choice gifts from friends of the Bodleian. In the centre of the north wall is a new feature containing the names of Bodley's Librarians from 1600, incised and gilded. Above the panelling is a fine series of portraits of librarians from the early 17th century to the present day. The furniture is of interest, the chairs being collected from various parts of the Library, and an old 20-ft. table of a fine simple dignity was acquired.

RADCLIFFE CAMERA—READING ROOM.—For some years the work of renovating the Camera, heating it, lighting it, rearranging its tables and furniture, and linking it up with the Old and New Bodleian Libraries, has been in progress. Now the ground-floor reading room, of which one of the radiating

MERTON COLLEGE : AN UNDER-GRADUATE'S SITTING-ROOM.



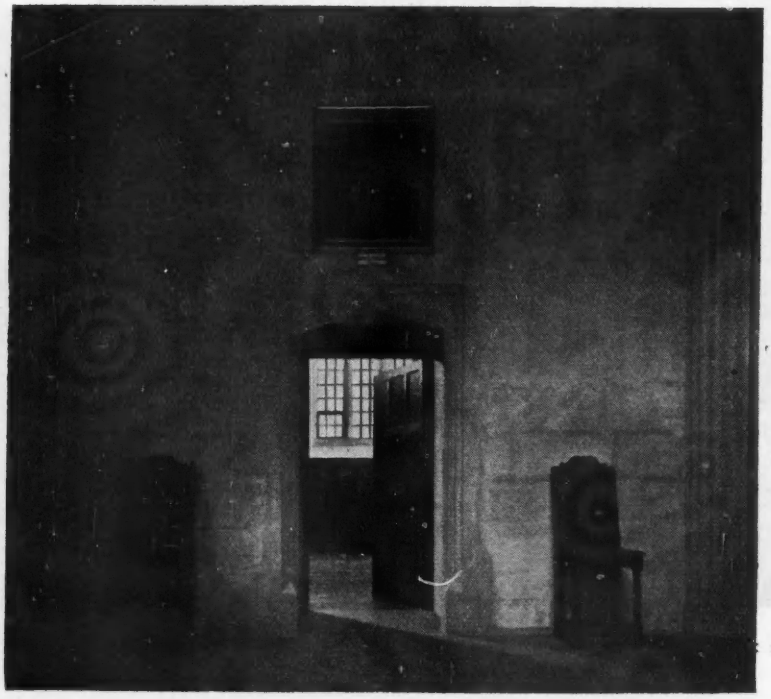
MERTON COLLEGE : DETAIL OF CENTRAL BLOCK, GARDEN BUILDING, SHOWING COMMON ROOM WINDOW AND CENTRAL ARCHWAY.



OLD BODLEIAN LIBRARY: NEW COUNCIL CHAMBER, LOOKING NORTH.

bays is shown here, is in full use. The work in the upper reading room was completed before the war. Mr. Worthington has now also completed a revealing process in the ground floor.

When Gibbs designed the Camera it had a great vaulted undercroft supporting the main library floor



OLD BODLEIAN LIBRARY: THE ANTE-ROOM TO COUNCIL CHAMBER.

OLD BODLEIAN LIBRARY: CENTRE FEATURE OF NORTH WALL OF NEW COUNCIL CHAMBER, RECORDING BODLEY'S LIBRARIANS.

above, like Queen's and Worcester. In course of time these open arcades were filled in, and the spaces were converted to library use. The central saucer dome and the stone vaults of the bays of this magnificent chamber are among the most interesting pieces of Renaissance vaulting in England. For a century its beauties have been unseen. Used as a book store, its piers and arches were encrusted with shapeless bookshelves, its floors encumbered with rolling stacks. All these have now been removed, and the vaulting, which was almost black with grime, has been cleaned, so that it is now as fresh as when it was first built. All this great area of

THE RADCLIFFE CAMERA: A BAY IN THE BASEMENT (GROUND FLOOR).

stonework was cleaned by hand without any chemicals or acids, that might have damaged the stone surface; 150 sponges were worn out by the four men who did the work.

Concealed lighting illuminates the coffering of vaults and domes, and the new reading tables, with their comfortable chairs, have parchment-shaded lamps. For a century the beauties of the Camera Basement, as it is somewhat inaccurately called, have been unseen. Now, a really great architectural work, forgotten and hidden by dirt and books, has been brought to light. It has become consequently one of the finest rooms in Oxford.

CORRESPONDENCE

[Whilst we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

The Future of the Quantity Surveyors' Profession.

TO THE EDITOR OF *The Builder*.

SIR,—In your issue of December 11 your correspondent "C. Q. S." refers to the report on the Future of the Quantity Surveyors' Profession prepared by the Quantity Surveyors' Committee of the Chartered Surveyors' Institution. He makes the comment that this document reveals a hankering on the part of the Committee to revert after the war to the pre-war *status quo* when practically all contracts were let on a lump-sum basis with bills of quantities. The wish is father to the thought.

With the great volume of work both of reconstruction and new construction which will have to be put in hand when hostilities have ceased, it is clear that much of the work then to be done will have to be tackled by more rapid methods. Some public bodies, especially municipal authorities, may venture on to the debatable ground of direct employment, under which system there is no call for the quantity surveyor. Other ways of starting building operations quickly without the unavoidable delay attendant on the preparation of quantities are by the cost-plus contract and by the measure-and-value or schedule contract. The Committee concede that both these forms have their place in the economy of the industry, and that in both, when properly handled, opportunity is afforded to effect saving in time. The point I wish to emphasise is that under either method the surveyor will have to be "on the job," and different and probably more onerous service will be required of him than is the case under the old lump-sum method of contracting. All this obviously calls for far greater practical knowledge on the part of the surveyor than is required for the routine duties imposed on him in the preparation of quantities.

The report of the Quantity Surveyors' Committee is somewhat disappointing in that it does not make any recommendations as to the steps to be taken to train new entrants into the profession for this wider scope of the surveyors' duties after the war. The large volume of building work will necessitate great increase in the numbers of quantity surveyors, and steps should be taken now to encourage the recruitment of the right class of young men. The curriculum of the examinations of the Chartered Surveyors' Institution, again, might be reconsidered so as to include tests of competence on the practical side of surveyors' duties, including all the factors that go to make up the values of building operations. Candidates for the professional diploma might well be required to show that they have spent at least, say, twelve months either with a builder or on works in progress. A true appreciation of what goes to make up the value of building works can only be obtained from practical experience of the various operations involved, gained from first-hand knowledge.

The quantity surveying profession will be of value to the public after the war only in so far as it proves itself qualified by knowledge and experience to undertake the different duties which it will be called upon to perform, and its ability to adapt itself to the altered conditions then obtaining. BALBUS.

Builders' Apathy.

TO THE EDITOR OF *The Builder*.

SIR,—During the last two years I have attended many area and quarterly general meetings of both the L.M.B.A. and F.G.L.M.B. and have been impressed by the alarming apathy of their members so far as attendances are concerned.

Surely every medium and small builder knows that at the present time his very existence is at stake, and that, although the two associations are doing a real job of work, it is up to the builder to help himself. But it is not enough to say the associations are doing all they can; it is the duty of the individual builder to support these meetings by his presence and by participating (so far as he is able) in the deliberations of the organisation to which he belongs, thus improving the trade conditions and, incidentally, bettering himself.

It is my fervent hope that in the fullness of time the two organisations will form one entity, but this will only come about by the whole-hearted support of all master builders. C. F. BRYEN.

"Transfer of Men."

TO THE EDITOR OF *The Builder*.

SIR,—Regarding the letter of Mr. Coppock in your issue of November 27 and that of Mr. Venning in the issue of December 4, this argument between the respective organisations gets us nowhere.

What we want is a combination of all, employers and employees, to combat the Ministerial dictatorship which is sapping the strength of the nation.

These camps could easily have been built by the Army, and, even with extra pay for the troops, would have cost far less. Wars need to be run economically as well as properly.

There are also several other matters which should be looked into and stopped. matters which are causing a great deal of unrest in the civil population. You can stop these things if you have a mind to.

WORKING EMPLOYER.

COMING EVENTS

Friday, December 18.

HOUSING CENTRE. Mr. Henry G. Strauss, M.P., will present prizes in "Town and Countryside Competition for Schools." 13, Suffolk-street, S.W.1. 2.30 p.m.

Saturday, December 19.

ECCLESIOLOGICAL SOCIETY. Mrs. K. A. Esdaile on "The Builders of Historic London." 6, Queen-square, W.C. 2.30 p.m.

INSTITUTE OF QUANTITY SURVEYORS. Meeting of London Branch. Caxton Hall, S.W.1. 2.30 pm..

West of England Branch Meeting, Royal Hotel, Bristol. 4 p.m. (Dinner at 7 p.m.)

Tuesday, December 22.

HOUSING CENTRE.—Mr. W. McG. Eagar on "A Social Intelligence Service." 13 Suffolk-street, S.W.1. 1.15 p.m.

Tuesday, December 29.

ASSOCIATION FOR PLANNING AND REGIONAL RECONSTRUCTION. — Discussion on "The Work of the Association." 32, Gordon-square, W.C.1. 5.30 p.m.

BIRMINGHAM'S RECONSTRUCTION PROGRAMME

THE QUESTION OF FINANCE.

PRESENTING the first report of the Birmingham Reconstruction Committee, which anticipates an expenditure of nearly £100 million, COUNCILLOR NORMAN TIPTAFT (Chairman) said: These schemes do not, by any means, represent the whole physical reconstruction necessary. That will involve much larger figures, but the Committee felt that the most urgent post-war problem might be unemployment, and therefore its first duty was to find out what schemes could be made available to prevent it as far as possible.

The Council will recognise the difficulty of a local authority, even one as important as our own, making a definite blue print for its future, without knowledge of what the Central Government intends to do. So far, the Government has not really got down to Reconstruction. It has had various reports prepared—the Barlow, the Scott, the Uthwatt and now the Beveridge. They will doubtless provide the basis of much future legislation.

So far, the Government has not indicated how the various schemes are to be paid for. Until we get official information, I cannot tell the Council what the financial schemes will be. I can say definitely that if we are to depend on the old-fashioned methods of loans to local authorities at three or four per cent. interest, Birmingham could not perform its necessary share of the national plan.

It would seem, if the job is to be done—and we intend it shall be—that we must have either a Government loan free of interest, or else Government grants up to 90, or in certain cases, even 100 per cent.

Pressure may be put on the Government to try unorthodox methods of finance. Thinking people are beginning to say that if the Bank of England can create credit to make a profit for its shareholders, the community might create credit for its own services, and the benefit of its citizens. I will not emphasise the statement frequently made, that because we are spending £12 millions a day on war, therefore there must be unlimited money available for peace afterward. I do say that the nations will require these promises of a New World to be taken far more seriously than they were taken after the last war.

As far as this City is concerned, we shall listen to and are anxious to co-operate with the Government, but we will not be fobbed off with the excuse that there is no money available for Reconstruction, when we know that if the war goes on for another ten years it will still, somehow or other, be financed.

However limited a local authority may be at present, one of its vital functions is to urge the Government to produce its national plan and delegate the requisite powers, so that municipal schemes for peace will not be held up by lack of information as to what Parliament will require.

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According to General Smuts, peace may be expected in 1944. Since he spoke events have moved very rapidly. If we started this minute on a comprehensive Reconstruction programme, we should not be ready to do all that needs to be done by 1944.

Responsible Ministers may be desirous to act promptly, but what they will do, as distinct from what they could, depends largely on the volume of public opinion behind them. We've got to make the country reconstruction-minded now.

FORMS OF CONTRACT

DISCUSSION AT ARCHITECTS' AND ENGINEERS' CONFERENCE.

ANOTHER of the conferences between engineers, architects and others interested in the building industry was held at the Institution of Civil Engineers, Great George-street, S.W.1, on Tuesday, December 8. The President of the Institution, SIR JOHN THORNYCROFT, was in the chair.

The various types of contract used in the building and engineering industries were discussed, chiefly from the engineering point of view.

After the opening remarks of the chairman, the first speaker was MR. E. J. RIMMER. Local authorities or other building owners, he said, might employ for their work a builder or contractor who would be paid a lump sum. Under this form of contract the accuracy of quantities as supplied by the surveyor to the contractor was not guaranteed, and the contract usually carried an obligation to carry out alterations on directions, and provided that these should be valued at the unit sum on which the contract was based. A second form of contract provided for the carrying out of work which was clearly described, but on the terms that if the number of units of work was greater or less than in the contract, the contract sum would be increased or decreased. This form of contract made provision for variations to be valued on the basis of the unit prices of work. It was known in building as the Builders' Quantities Contract, and in civil engineering as the Measure and Value or Schedule Contract.

Speaking of the differences which arose when this form of contract was applied in building or in civil engineering, the speaker said these differences were partly due to the larger number of processes in the building industry, and the specialisation which had become noticeable in recent years. Another important fact was that the building owner in civil engineering was usually a public body or large corporation, which would allow the engineer to prepare all the contract drawings and all the details of the work before the contract was placed; whilst, on the other hand, in the building industry, the building owner was often not prepared to incur the charges and fees for the preparation of details of the work until he had a contractor's firm price. Further, once the building owner had decided to proceed, heavy ground rents and other considerations made him all impatient to have the work started immediately. He would not give the architect time to prepare details.

MR. E. E. HALCROW said attempts had been made to prepare conditions of contract applicable alike to building and civil engineering work, but he did not favour such a document. The risks taken by a builder were of a different character from those placed upon the civil engineering contractor; and he could not see any disadvantage in having two documents.

MR. SYDNEY TATCHELL began with some definitions: (1) the building owner is an honest man who, whilst not expecting something for nothing, desires good value for his money; (2) the builder is not a mere financier, but an honest craftsman who takes pride in his work and desires to give good value for his employers' money; (3) the architect is a competent and qualified practitioner who, having undertaken to render professional services for reward, possesses an ordinary and reasonable degree of skill, and acts with reasonable care and diligence in rendering those services, and is liable for failure to do so; (4) the quantity surveyor is a man learned in the science of mensuration, and the architect's guide, counsellor and friend; (5) the contract is an instrument whereby for consideration an honest craftsman undertakes to construct a building for a building owner who is also an honest man.

Continuing, Mr. Tatchell described the origin of the 1939 standard form of building contract. It was, he said, the successor to those produced in 1909 and 1931. In 1928 it had been realised that during the twenty years which had elapsed since the production of the 1909 form, building practice had changed to an extent which justified consideration and revision. A joint committee had therefore been set up under the ægis of the R.I.B.A. and the National Federation of Building Trades Employers, and from the outset it had been the object of this joint committee to provide the basis of a square deal between building owner and contractor. In meetings covering a period of two and a half years, and consultations with quantity surveyors, sub-contractors and other industrial interests, and after obtaining the sanction of their respective bodies, the 1931 Form of Contract had been published. This had met with approval and been a success during the eight years of its existence. The few disputes arising had been on matters of fact, or on account of insufficient comprehension of its provisions on the part of one or both of the signatories. Not the least of the reasons for the success of the form was the fact that it reflected what might be regarded as good industrial practice at the time. Immediately on the publication of the form it had been felt by the Committee that a joint committee tribunal should be set up to consider such revision as in practical use might appear desirable, and, furthermore, to keep in touch with changing circumstances in the industry so that at proper intervals new conditions might be issued. This tribunal had been set up, consisting of representatives of architects and contractors, and to it there had been invited quantity surveyors and others whose special knowledge and experience of specific points would be of asistance. Over a period of eight years this tribunal had sat at frequent intervals and, having had before it suggestions from all quarters as to possible improvement, had produced in 1939 the present standard form as representing the maximum possible degree of industrial experience and industrial approbation. As in the case of the 1931 form, alternative documents had been published, one for use where quantities formed part of the contract and the other where they did not. There was a special form for local authorities. In the first of these forms the specification was no longer a contract document. The tribunal had come to the conclusion that bills of quantities provided the fairest basis upon which the building owner on the one hand and the builder on the other might assess accurately their respective contractual obligations. The specification remained as a guide only to the builder in carrying out the work. Nothing, however, contained in that document imposed further obligations upon the contractor, who was entitled to remuneration in respect of any further work required in excess of that described in the bills of quantities. In the form where quantities were not part of the contract, the work to be done by the builder was that shown on and described by the contract drawings and specifications. In practice it was found that, save in building works involving an expenditure of less than £1,000, the preparation of bills of quantities as a basis for the contract was now invariable. A complete contract entailed co-ordination of many activities, and this being so, any system which lent itself to dislocation and delay would be rightly deprecated. The principles of the standard form, therefore, rested on a dual basis. First there was vested in the architect, as agent of the employer, control of the actual execution of the contract works; and, secondly, there were wide remedies as to compensation and the like vested in the contractor. Other changes of importance in the 1931 form had included the revision of the arbitration clause, the insertion of a war risks clause, and new provisions with regard to delay, bankruptcy, determination and certificates. The old unsatisfactory provision with regard to nominated sub-contractors had been qualified, and a new category of nominated suppliers had found place in the 1939 form. No attempt had been made to achieve the impossible task of producing a document which would provide for every imaginable contingency. It assumed a building owner who desired to pay a proper price for the work to be done, and an architect who fulfilled the implied obligations of skill in producing drawings and particulars which the quantity surveyor was able to express in terms of quantities. Such bills of quantities, prepared on careful drawings and particulars, should present to the contractor in tendering a picture conveying to him the amount of labour and material for which he had to estimate. Should the bills of quantities omit any work which should have been included, and the contractor be called upon to supply the deficiency, he would be paid for it.

Of competitive tendering, Mr. Tatchell said the objections to it were (1) the selection of builders of unequal calibre, and (2) the insistence on the acceptance of the lowest tender. Wherever possible the architect should select for tendering a limited number of contractors of equal standing, chosen for their suitability for the particular contract. Furthermore, when inviting tenders, it should be made clear that the tender to be accepted would not be the lowest, but that which most closely approximated to the average of the tenders submitted. By such a method there would be no inducement to the contractors to cut their prices, nor to price excessively. On occasions when, with the consent of the building owner, this procedure had been followed, it had been found to work admirably.

The builder should not be made responsible for contingencies that could not be reasonably foreseen, notably in regard to foundations. It was the architect's responsibility to satisfy himself by trial borings as to the nature of the subsoil and if, even then, there was reason to doubt the accuracy of the architect's deductions provision should be made in the bills of quantities.

Another matter was the time in which a contract should be executed. It should not be left to contractors tendering to state the period in which they could carry out the work, because this introduced an element of competition which frequently operated unfairly against contractors who took a serious view of their responsibilities. The question of time should be determined at the outset by the architect in consultation with the quantity surveyor, and stated in the bills of quantities. To avoid delay in progress all the necessary drawings and particulars should be available to the contractor at the commencement of building operations.

MR. OSWALD HEALING said contractors had a serious grievance in the tendency that had crept in of letting a large proportion of the whole cost of the works to nominated sub-contractors. This applied both to structural work of a specialist character and to engineering trades such as heating and lighting, and had narrowed the field over which the contractor could exercise his skill as an estimator. Contractors had contributed to this state of things by sub-letting many trades which formerly had been undertaken by them in the ordinary course of their business. The general trend in the administration of building contracts was towards specialisation, whether under the instruction of architects or initiated by contractors; but many contractors in general business were themselves able to undertake some of the operations which it was customary to place in the hands of specialists. Specialisation in constructional work had led to the system by which estimates were obtained from specialist contractors, who not only built but designed the work as well. This arrangement was open to objection as being an attempt to amalgamate in one business the professional duty of designing to the best advantage and undertaking the commercial transaction of selling goods for profit. The two operations were quite dissimilar and their interests incompatible.

In modern building there was much design of a distinctly engineering character incidental to and complementary to the work of the architect; and it was in this direction that the co-operation of the engineer with the architect would contribute most to the success of the building industry. Architects themselves had felt the need for this co-operation in connection with such special subjects as deep foundations, retaining walls and the like. Such co-operation might go very much further and embrace structural steelwork and reinforced concrete. Drawings for all these structures might be prepared by consulting engineers, and the quantities taken out and included in the bills of quantities, the contractor being left free to carry out these works himself, or, if he desired, to sub-let.

The consulting engineer's drawings and the quantity surveyor's bills of quantities calculated from these drawings formed the best guarantee an employer could require that his building would be both scientifically sound in construction and economical in cost. In heating and lighting installations the same principle might be followed, the design being made by a consultant, and specialist firms in the particular trades being invited to tender on detailed bills of quantities.

Several other speakers followed.

THE TOWN PLANNING INSTITUTE

PRESIDENTIAL ADDRESS.

COLONEL W. S. CAMERON, M.Inst.C.E., delivered his Presidential Address to the Town Planning Institute recently.

Having referred to the Uthwatt and the Scott Reports and the need their adoption would create for legislation substantially amending, strengthening and extending the present law, the speaker proceeded:

We hope that this legislation will be forthcoming very shortly after the Government has digested the Scott and the Uthwatt Committee's Reports, as at the moment many developments are taking place which, if greater legislative powers were given to local authorities and planning committees, would not occur, even in war time.

Education of Planners.

Let us now look at what the Town Planning Institute has done with reference to the education of planners.

The first examination syllabus of the Institute was published in 1916. In 1930 a Joint Examination Board, representative of the Institute, the Royal Institute of British Architects, the Chartered Surveyors' Institution, and the Institution of Municipal and County Engineers, was established, in order to secure a uniform standard of qualifications for all men and women practising any branch of planning.

The Board now conducts the Final Examination of the Institute and the Town Planning Diploma Examinations of the other constituent bodies. The Joint Examination Board and the Institute also took the very important step of fostering the establishment of recognised schools of planning.

In the course of years the Institute has built up a trained professional body, and in this has had the cordial assistance of the Institutions associated with it on the Joint Examination Board.

During the war much research is being carried out by the Research and Study Group and by the Town Planning Officers' Section.

The question of the training of planners has recently received very careful consideration by the Institute, and recommendations have been made to the Government in view of the difficult situation which has been created by the war.

Furthermore, the question of providing comprehensive training of the planner of the future has received close attention.

Since the Institute was founded the scope of planning has widened, and the place of the geographer, agriculturist, sociologist and economist has become more evident. How can the Institute widen its scope to cover this new field to meet the challenge of national planning and the reconstruction of new cities?

Although the scope of planning has widened so much, the professional planner, whilst taking the widest possible view and collaborating to the full with the experts in all branches of the subject, should surely stick to his last—namely, planning, with the object of securing that the land of this country shall be put to its best possible use, so that people can live on it a good life, with opportunities for employment of leisure and with things good to look upon.

The widened scope of planning and increasing recognition of its importance by the community requires highly trained personnel, but the times are inopportune for practise and training, in that winning the war is our major preoccupation, and an increasingly large number of our members are serving with the Forces or engaged on war work.

The Council of the Institute has recommended means for special training at the end of the war, and also for refresher courses for the trained planner.

In my opinion the Institute cannot undertake a more important task than the encouragement of the training of planners particularly by supporting the recognised centres of planning education. The recognised schools which, in spite of difficulties due to war-time conditions, have maintained their full courses, are to be congratulated, and should be given all possible assistance in dealing with the problems of education which will confront us at the conclusion of hostilities. Whilst, for geographical reasons, many students must continue to study by means of the excellent correspondence courses, it should be possible for every candidate to obtain first-hand training in the all-important subject of design, and this can only be done adequately at a teaching centre.

The work in front of us in replanning and reconstruction can only be carried out by the co-operation of the architect, the engineer, the surveyor and the planner, and in this respect I feel that it is better that the planner should have the additional qualifications, given by one at least of the older professions referred to.

It is obvious that when planning gets into its stride after the war, there will be ample scope for all those who are qualified, but examinational qualification in itself is not enough to give the status of a fully qualified planner. This can only be obtained after varied experience has been gained in the preparation of schemes and in the study of all those many complex features which become evident after extensive surface utilisation maps have been prepared.

The need for this experience in addition to examinational qualification is fully recognised by the Institute, but for many is obviously not easy of attainment during the war. The challenge of post-war planning must, however, be met, and experience will be quickly gained in a hard school.

Post-War Road Planning.

In the post-war period, from 1920 onwards, the country was urged to push on with works of reconstruction. There was the pressing question of unemployment, which always follows the dislocation of trade and industry and the concentration of labour on non-productive work such as the making of armaments and munitions.

I make no apology for tracing these events, as we shall in the future be faced with similar conditions, but in a much greater degree.

The Unemployment Relief Works Act, 1920, was hurriedly rushed through Parliament to give local authorities drastic powers of entering on private lands, required for public works, after giving the owners and occupiers seven days' notice to enter.

Very large road schemes were put into operation all over the country, in many cases with insufficient preparation, frequently without the preparation of 1/500 scale surveys. Often schemes were proceeded with under the authority of the Unemployment Grants Committee and the Ministry of Transport, with no more detailed information than can be obtained from 1/2500 scale ordnance plans.

In some cases foresight had prepared the preparatory work, and, by the process of selection and careful surveys, had arrived at the best possible routes for new roads; but this was by no means general throughout the country, and this unavoidable lack of proper preparation resulted in many things being unforeseen in the construction of these roads.

Among the consequential results were the cutting of great scars into the countryside, which have not yet healed up, also forest trees were felled unnecessarily.

In the actual construction of the works, staffs had to be temporarily built up, and new road widths, required for the construction of thousands of miles of new roads, were bought from landowners. In some cases the lands were dedicated. We all know what followed; the adjoining agricultural land leapt up in value from £30 to £50 per acre to £1,000 per acre, or, in some cases, even more.

Under the Development and Road Improvement Act, 1909, as amended by the Roads Act, 1920, it would have been possible for the Ministry of Transport to have acquired strips of land on either side

of the proposed road, within 220 yards from the middle of the proposed road, and thus not only to have secured parkways, but also to have reaped the benefit of non-frontage development. However, the works were being carried out for the relief of unemployment, and apparently the Treasury took the view that consequently the money voted for this object could not be devoted to the acquisition of additional land. As a result, the owners were presented with desirable building frontages, free from road charges, and building development followed in the now familiar ribbons.

Many of those in charge of works, however they may have wished to consider the amenities, had neither the necessary information available, nor the time to give considered thought to what every highway engineer should do—namely, fitting the new roads into the countryside so as to make them part of it and something pleasing to behold. A well-planned modern road, if the amenities have been properly considered, itself forms a design which becomes a component part of the terrain through which it passes.

In the period immediately following the last war, little help and guidance were available from the Ministry of Transport, although those engaged in housing had the excellent Tudor Walters Report and a later handbook on housing to assist them. Our Institute, however, recognised the importance of this matter, and papers were read, and afterwards published in the *Journal* (*e.g.*, Vol. VII, 1920-1) with illustrations, and in 1929 we published the illustrated report on the "Layout of Cross Roads, Junctions and Corners." This report was circulated to road authorities by the Ministry of Transport, but it was not until later that they produced, in collaboration with the engineering institutions concerned with road construction, their useful Memorandum 483, "Roads."

It is to be hoped that this excellent little book will be revised and brought up to date with the further information which is now being collected from various sources by the new Ministry of Works and Planning.

The engineer's' influence on planning is also made evident in the construction of bridges, which can do so much to add to or mar the beauty of the countryside.

Post-War Housing.

Having referred to the post-war housing problem, the speaker proceeded : It would seem that the first requirements are that the building societies should give consideration to the advancement of money on houses only in those cases where :—

(1) The plans have been prepared by a registered architect, and approved by the planning authority;
(2) The erection will be supervised by him;
(3) The builder is a registered builder (*i.e.*, has the necessary qualification approved by the Ministry of Works and Planning);
(4) The standard of development is such as complies with the approved standard previously agreed by the planning officer and the building society's architect.

This, of course, requires that each building society should have a registered architect as a member of its staff.

If the Uthwatt Report is accepted by the Government and implemented by legislation, the Development Commission will have power to refuse consent to any development which is not up to a standard approved by them.

Environment of Mediæval Buildings.

The question of spacial environment is one which has been the subject of some controversy recently with regard to the redevelopment of sites surrounding churches and cathedrals, where adjoining buildings have been removed by enemy action.

It has been argued that the mediæval builders were quite content that their cathedrals should have other buildings close up to them, and that they had good religious warrant for their views.

It is obvious that each case requires separate and sympathetic consideration, and that architectural and ecclesiastical advice is essential. On the other hand, where the enemy has removed incongruous buildings which screened from view a lovely cathedral or church, it would be foolish not to take appropriate advantage of adversity.

The desirability of building up a community life based on neighbourliness and common interest is one of the aims planners have in view, and this is entirely compatible with the judicious replanning of the surroundings of some of our oldest cathedrals so as to ensure a fuller æsthetic appreciation of these historic buildings by a greater number of the community.

Vote of Thanks.

Proposing a vote of thanks to the President, SIR PEIRSON FRANK (Chief Engineer to the L.C.C.) said he thought the members of the Institute would agree with the President in hoping that the implementation of the Uthwatt and Scott reports would come soon.

The President had expressed the hope that Memorandum 483 on roads would be revised and brought up to date with the addition of the further information which was being collected from various sources by the Ministry of Works and Planning. Actually work on revising the Memorandum was finished, the revised version had already been transmitted to the Ministry of War Transport and was being prepared for printing. The same Committee was now dealing with the question of motor roads.

There was also a Sub-Committee of the Institution of Civil Engineers dealing with the control of the colour and texture of reinforced concrete structures.

On the question of spacial environment and the redevelopment of sites surrounding cathedrals and churches where adjoining buildings had been removed by enemy action, the speaker said that the President had come to a conclusion which he thought would be largely approved.

MR. W. DOBSON CHAPMAN, in seconding the vote of thanks, said the very nature of the recommendations of the Barlow, Scott and Uthwatt Committees gave a clear indication that whether or not the recommendations were adopted in part or whole by the Government, an even higher standard of professional education had become an urgent necessity. In the future we might expect that statutory planning would require not only greater skill on the part of the planner, but an extremely wide knowledge of architecture, engineering, surveying, geography, agriculture, sociology, economics, and landscape architecture. No individual could hope to possess an expert knowledge of all these subjects. It was clear that the greatest measure of co-operation amongst those possessing knowledge in each would be essential to the preparation of an efficient plan. It would be for the planner, whatever might have been his basic training, to assimilate the data collected in these various aspects of planning and to interpret them in the plan. At the same time the practising engineer, architect or surveyor would require a knowledge of planning equal at least to that required of candidates for the Joint Town Planning Examination Board examinations at the present time. The speaker advocated that a further and more advanced examination should be instituted as a necessary qualification for membership of the Institute in the future.

He supported the President in his belief that many of the evils inherent in speculative building, particularly house building, which had occurred in the past, could be eliminated if unified action was taken by building societies, and other suggestions made by the President were carried into effect. The speaker suggested a further requirement, namely, that the manufacture of machine-made building material, such as tiles, bricks, and fireclay products, which were so prominent in the external appearance of our buildings, should be subject to national control, and that those responsible for such control be given power to take into consideration the ultimate appearance and weathering qualities of such materials, with authority to prohibit the use of those materials which could not be fitted into any landscape when used externally.

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OBITUARY

W. S. Purchon, M.A., F.R.I.B.A.

We regret to record the death of Mr. William Sydney Purchon, Head of the Department of Architecture and Civic Design in the Technical College, Cardiff. Mr. Purchon collapsed while speaking at a town-planning conference on December 9. He was 63.

Educated at the R.A. schools, he was lecturer in charge of the Department of Architecture at Sheffield University from 1907 till 1920, having previously been in the Admiralty Works Department. He became Head of the Welsh School after the last war and at once proceeded to build it up to the healthy and flourishing place it now occupies among the R.I.B.A. "Recognised" schools, with an impressive record of successes in awards. The week before he died he was able to announce that in spite of the war the number of students was now the largest on record. He was a member of the R.I.B.A. Council, and from 1935-37 was President of the South Wales Institute of Architects. His architectural work included canteens and laboratories for Thos. Firth and Sons; houses at Scunthorpe for John Brown and Co.; and ex-

tensions to "Claremont" at Matlock. He will be greatly missed by his friends and students in whom his interest and affection never flagged.

C. L. Vigers, P.S.I.

We regret to record the death, on December 12, of Mr. Geoffrey Leslie Vigers, of Bickley, and 4, Frederick's-place, Old Jewry, E.C.2, President of the Chartered Surveyors' Institution; his father, Mr. Leslie Vigers, and his grandfather, Mr. Robert Vigers, having been President before him, in 1910 and 1898, respectively. Born in 1888, Mr. Geoffrey Vigers was articled to his father and joined the firm of Vigers and Company in 1905. His firm were associated with the construction of the London Underground railways and now act for the London Transport Board. Mr. Vigers found and bought the site of the Battersea Power Station. He had been a member of Council of the Institution since 1932 and chairman of its Parliamentary Committee for a similar period. He was also a member of the War Damage Commission. His loss will be greatly felt by the Institution and by his professional brethren.

Alderman E. Forshaw, L.R.I.B.A., F.S.I.

The death has taken place at Uttoxeter of Ald. Edward Forshaw, L.R.I.B.A. (retired), at the age of 80. He was a member of the firms of Forshaw and Palmer, architects, of Burton, and of E. Forshaw and Sons, of Hanley. Among the appointments he had held was membership of the River Trent Conservancy Board and of the executive committee of the Trent Fishery Board. He had sat on the Staffs County Council since 1917, and was elected alderman in 1934. He had been since 1910 a member of the National Housing and Town Planning Council.

E. C. Lavender, F.R.I.B.A.

Mr. Ernest Clifford Lavender (whose death we regret to record) was a member of the Wolverhampton firm of Lavender and Twentyman—a firm which designed much work in the Wolverhampton area, including St. Martin's Church; St. Gabriel's Church, Walsall; the new offices of the Wolverhampton Gas Company; and the garden hall in St. George's Churchyard (for which Mr. Lavender was honorary architect). He was architect for the Archdeaconry of Stafford under the War Damage Act. Mr. Lavender, who was 52, received his training from his father who had been in practice in Walsall. He served in the last war as a captain in the South Staffs Regiment.

William Sharp.

We have to record the death on December 4 of Mr. William Sharp, of Chelmsford. Mr. Sharp, who was 61 years of age, was manager for the late Mr. Henry Potter, of Chelmsford, and subsequently acquired the business, which has since been carried on as Messrs. Henry Potter (William Sharp), Ltd. Mr. Sharp was held in as high esteem in the building industry as he was in local affairs, and at the time of his death was junior officer of the Eastern Federation of Building Trades Employers, whilst he was also President of the Chelmsford and District Building Trades Employers' Association. He was a member of the employers' side of the Eastern Counties Regional Joint Committee for the building industry. Amongst local affairs he took a keen interest in the welfare of young people, and was a member of the Borough Education Committee, and until recently was chairman of the Rainsford Youth Group.

ASSOCIATION OF BUILDING TECHNICIANS

CONFERENCE OF AERODROME BUILDING TECHNICIANS.

A MEETING of technicians from a number of aerodrome sites was held in an East Anglian town on November 21. MR. COLIN PENN (late President, Association of Building Technicians, late A.A.S.T.A.) took the chair.

MR. BIRKIN HAWARD, organiser of the A.B.T. opened the discussion and defined the objects of the meeting as :

(a) to demonstrate the aims of the Association in practice;
(b) give an opportunity for technicians on similar work in the area to meet each other and exchange experiences from their sites;
(c) discuss means of speeding up work on the sites;
(d) to set up A.B.T. organisation in the area.

Reports were then made from a number of sites. One site has already set up a branch and three others have decided to do so. There was general agreement on the need to form an area committee. To combat the delaying effect of bad weather speakers recommended : Firstly, concentration on pilot strips for all runways from the outset to provide clean transport across whole site for materials, plant and labour; secondly that methods of concreting in frosty weather should be developed quickly, particularly use of hot water. This presented many problems on such big and widespread jobs. For instance, at least 1,500-1,800 gallons of hot water an hour are required on such a job. Investigations and preparations should be put in hand now. Shortage of materials was, in some cases, serious, particularly of ballast. Procedure for requisitioning land for ballast pits should be greatly speeded up.

The constant changes of plans "made too lightly" by the Air Ministry and referred to in the Select Committee's recent report, was confirmed by practically every speaker. One instance was given of original layouts being based on contour surveys that were 3 ft. out and of the end of a main runway originally planned to cross a main road that had been revised and reset out later to avoid crossing. Fresh instructions had now been received to move the whole lot back again. This was quite a serious matter, and it was intended to act accordingly. All present complained of confusion of instructions and changes in layout of dispersal points. It was further stressed that the Air Ministry did not seem able to apply the experience of one site to another. The same mistakes were being made over and over again.

There was general agreement that A.M. site staff should be larger and have greater powers of decision. Delays in getting decisions on relatively small points from H.Q. were enormous. The meeting endorsed the opinion of the Select Committee regarding salaries of R.E.s, and considered that their salaries and those of their staff were much too low.

A representative of the A.B.T. branch in Air Ministry Head Office spoke of the problems at their end and the recommendations of the Branch to improve the inefficiences mentioned. They had submitted these to the Ministry. The lack of co-ordination of work of different departments of the Ministry dealing with the same site was a serious fault, in their view, and there was great need for better contact between the man who did the plans and the men on the site. Technicians recognised that good welfare conditions on the site were a prerequisite for good progress on the job. An agent member present recommended pioneer corps or mobile squads to prepare canteen and living quarters on a site before the main work started. The assistance given by the N.F.B.T.O. Site Officers with labour problems on the site was greatly appreciated, and all were anxious for closer co-operation and for these officers and other T.U. officials to do all possible to increase Trade Union organisation on the sites.

MISS BLANCO-WHITE, Chairman of the A.B.T. Technical Committee, spoke of the development of Works and Production Committees in the building industry, and of the report just being published on this subject. She spoke on methods of concreting in cold weather and said the Technical Committee would help with this.

MR. A. W. HUBBARD, N.F.B.T.O., Regional Secretary for the area, attended the meeting and said that the introduction of site officers (appointed by the Federation and paid by the Ministry of Works and Planning) had very greatly improved the Trade Union organisation in the area and assisted the smooth running of jobs. The Federation were fighting hard for adequate welfare conditions on these very difficult sites, and the general standard in the area was now fairly good.

THE CHAIRMAN summed up the discussion. The reports made certainly confirmed the very serious criticisms made in the recent report of the Select Committee on National Expenditure on "Aerodrome Construction," and the meeting supported recommendations of that report fully.* Especially that :—

1. Widespread attention should be directed on the sites to the completion date, and progress schedules should be prepared and seriously applied, particularly to assist the Ministry of Labour to allocate labour at the right time.
2. The constant changes of plans, when the job is in construction, should cease, and only revisions that were absolutely necessary should be made. The abandonment of unnecessary departmentalism and "red tape" at H.Q. would assist in this.
3. Greater authority for decisions should be given to the A.M. representatives on the sites The salaries of these officers and their staff should be improved
4. Greater attention should be given to the welfare conditions of all workers on the sites right from the commencement of the job. The effort would be many times repaid in progress.

* See *The Builder*, November 27 last.

LAW REPORTS

QUANTITY SURVEYOR'S SUCCESSFUL CLAIM.

KING'S BENCH DIVISION.
Before LORD JUSTICE DU PARCQ.

Inman v. Ludliner.

Lord Justice du Parcq, sitting as an additional Judge of the King's Bench Division, recently concluded the hearing of an action by Mr. William Charles Inman, a quantity surveyor, of Old Buildings, Lincoln's Inn, W.C., against Mr. Jack Ludliner, of Gt. Titchfield-street, W.C., to recover the sum of £1,061 8s. for work done by plaintiff for the defendant as a quantity surveyor.

Mr. Beyfus, K.C., and Mr. G. Granville Sharp appeared for the plaintiff, and Mr. Valentine Holmes represented the defendant.

Mr. Inman's case was that on March 11, 1938, the defendant, through his agent, instructed him to prepare bills of quantities in connection with a proposed contract for the rebuilding of premises known as Nos. 12 and 13, Rathbone-place, and Nos. 7-15, Green-street, W.C., the property of the defendant. Plaintiff carried out his instructions and prepared the necessary bills of quantities. Defendant proposed to proceed with the work in connection with erection of block No. 1, leaving block No. 2, comprising part of the property, to be carried out at a later date. Plaintiff had received his fees and expenses for No. 1 block, and he now claimed £1,061 8s. for work done in respect of No. 2 block.

Defendant denied that he was indebted to the plaintiff for the sum claimed, and pleaded that the fees would be paid as and when the other block was proceeded with, and that they were not due till the completion of the whole building.

His lordship, in giving judgment, held that the plaintiff could not be kept out of his money till the defendant had accepted a tender for No. 2 block. He was entitled to his money and must be paid for the work he had done. He gave judgment for the plaintiff for £1,061 8s., with costs.

LANDLORDS' LIABILITY FOR PERSONAL INJURIES DUE TO BROKEN WINDOW SASH.

HOUSE OF LORDS.
Before LORDS ATKIN, THANKERTON, RUSSELL OF KILLOWEN, WRIGHT AND ROMER.

Summers v. Salford City Council.

This case, which came before the House on the appeal of the plaintiff, Mrs. Florence Summers, of King Edward-street, Salford, from the judgment of the Court of Appeal, raised the question whether the defendants, the Salford City Council, had committed a breach of the statutory undertaking imposed by the Housing Act, 1936, by reason of the fact that the Council had contracted that the house of which the plaintiff was the tenant and the Council the landlords, should be kept by the latter, during the tenancy, in all respects reasonably fit for human habitation.

The material facts were as follows :—The plaintiff for 34 years had been tenant of the house in question. It was a two-storied house with two rooms back and front on the ground floor and two bedrooms back and front on the top floor. In February, 1940, one of the sash-cords of the top sash in the window of the front bedroom broke, of which fact the plaintiff informed the defendants' rent collector, he being the person apparently authorised to receive complaints of such things.

However, nothing was done about it, and when the window was moved it jammed, although capable of being opened to some extent. On April 3, 1942, whilst the plaintiff was cleaning the window the second cord broke and the upper sash fell, with the result that plaintiff's hands were crushed between the two sashes. The plaintiff accordingly brought the present action to recover damages.

At the trial at the Manchester Assizes, Mr. Justice Croom-Johnson gave judgment for the defendants upon the ground that notwithstanding that the sash-cord was broken, that fact did not prevent the house from being in all respects reasonably fit for human habitation within the meaning of Section 2 (1) (b) of the Housing Act, 1936.

The judge assessed the damages at £260 in the event of his decision being reversed on appeal. The Court of Appeal, however, by a majority of the Court upheld the judge's decision, and the plaintiff now appealed to the House of Lords.

The House allowed the appeal.

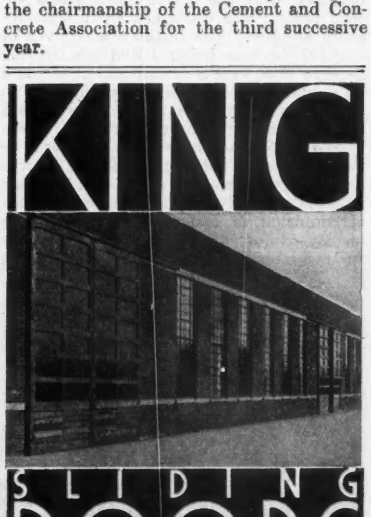
Lord Atkin, in the course of his judgment, said he had no doubt that the damage to the plaintiff was the direct consequence of the defendants' breach of their repairing obligations. She was engaged in a normal use of the house in respect of which there had been a failure to repair.

The other members of the House agreed, the appeal was allowed and the judgment of Mr. Justice Croom-Johnson and the Court of Appeal set aside, and judgment entered for the plaintiff, Mrs. Summers, for £260 with costs.

Mr. Neville Laski, K.C., and Mr. Armstrong Cowan appeared for the appellant, and Mr. H. Edmunds for the respondent Council.

C. and C.A. Chairmanship.

Mr. Halford W. L. Reddish, chairman and managing director of the Rugby Portland Cement Co., Ltd., has, at the unanimous wish of all the Portland cement manufacturers in this country, accepted the chairmanship of the Cement and Concrete Association for the third successive year.



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SOCIETIES & INSTITUTIONS

THE WELSH SCHOOL OF ARCHITECTURE.

Exhibition of Work.

An exhibition of the work of students in the Welsh School of Architecture, Cardiff Technical College, was held in the Assembly Hall of the Technical College on November 25. The Exhibition was opened by the Lord Mayor, Councillor James Griffiths, J.P. Mr. L. R. Gower, Chairman of the Central Branch of the South Wales Institute of Architects, presided. The Head of the Welsh School of Architecture, Mr. W. S. Purchon, in his address on the work of the school, pointed out that although considerable difficulties had to be overcome during the past session, a good standard of work was reached, six students being awarded the College Diploma, leading to exemption from the R.I.B.A. Final Examination, while three students were awarded the Certificate in Architecture, carrying with it exemption from the R.I.B.A. Intermediate Examination, two of these certificates being awarded with distinction. Notwithstanding that considerable numbers of the senior students had joined the Armed Forces before completing their studies, the numbers in the school were now the largest on record, as the entries of new students were steadily growing.

LIST OF AWARDS.

The following prizes were awarded by the Central Branch of the South Wales Institute of Architects :—Design, Second Year (£2 2s.), A. John; Design, Third Year (£2 2s.), W. H. Davies; Design, Fourth Year (£3 3s.), M. D. Lewis and M. C. Williams (equal); Design, Fifth Year (£3 3s.), Miss J. M. R. Bird. Measured Drawings Prize, 1st (£2 2s.), P. N. Powell; 2nd (£1 1s.), R. M. George.

The Welsh School of Architecture Prizes, etc., were awarded as follows :—The Lord Mayor's Prize for Third Year Students (£2 2s.), presented by Alderman James Hellyer, J.P., Ex-Lord Mayor, W. H. Davies.—President's Prize for First Year Students (£3 3s.), presented by C. F. Jones, Esq., A.R.I.B.A., 1st Prize, J. M. Jenkins; placed 2nd, F. S. Jennett.—The Working Drawings Prize (£2 2s.), presented by Ivor F. Jones, A.R.I.B.A., M. D. Lewis.—The Architectural Sketching Prize (£1 1s.), presented by John Bishop, A.R.I.B.A., 1st Prize, F. S. Jennett; placed 2nd, J. M. Jenkins.—The Batsford Prize for Architectural History and Theory of Design (£2 2s.), presented by Messrs. B. T. Batsford, W. H. Davies.—The Architectural Construction Prize (£2 2s.), presented by the Architectural Press Ltd., D. Davies.—The Civic Design Prize (£2 2s.), presented by T. Alwyn Lloyd, J.P., M. C. Williams.—The Sketch Design Prize (£2 2s.), presented by E. C. M. Willmot, F.R.I.B.A., W. H. Davies.—Certificate in Architecture carrying with it exemption from the R.I.B.A. Intermediate Examination : O. Davies (with Distinction), W. H. Davies (with Distinction), and R. A. K. Richards.—Diploma in Architecture (carrying with it exemption from the R.I.B.A. Final Examination and qualifying for Registration) : Miss J. M. R. Bird, H. Gealy, Miss V. J. Roberts, K. Wainwright, G. Lynham and R. Lougher.

Architects' Registration Scholarships were gained by John Matthews (first year of scholarship), W. T. Bobb (third year) and W. H. Davies (fourth year). All have been postponed.

Cardiff Technical College Scholarships, covering tuition fees and maintenance grants of £40 per annum, have been awarded to the following students now in the Welsh School of Architecture :—Second Year, J. M. Jenkins and F. S. Jennett (both of the Whitchurch Secondary School); First Year, D. W. Fletcher (Whitchurch Secondary School), P. A. Evans (Tonyrefail Secondary School), and C. Dyer (Newport High School).

THE INSTITUTION OF STRUCTURAL ENGINEERS.

The following candidates have been elected to membership :—

As Students: H. S. Atherton (Southport), G. H. Appleby (Taumaruni, N.Z.), J. Lambert (Torquay), G. P. Martin (Brighton), S. Robson (Linthorpe), A. R. Taylor (Stretford), and D. W. Turner (Woodford Green).

As Graduates: A. E. Seddon, M.Sc. (Manchester), I. Robb (Stretford), and J. Simon (Salford).

As Associate: J. T. R. Wildman, F.S.I. (London).

As Members: J. F. Cubbon (London), A. Henderson, M.Inst.C.E. (Aberdeen), J. B. Malcolm, M.Inst.C.E. (Wembley), H. S. Bailvala, B.E. (Bombay), J. S. Campbell (Hatch End), and J. H. Poulter (Blackpool).

ECONOMY IN BUILDING MATERIALS

THE Committee on Building Materials Standardisation of the Ministry of Works and Planning has issued two more Economy Memoranda. These are E.M.6—"Economy in the Use of Expansion Jointing Materials for Service Roads," and E.M.8—"Economy in the Use of Hessian for Pipe Insulation." Both of these Memoranda will be used by the Materials Controls and the Civil Licensing Division of the Ministry of Works and Planning.

Economy in the use of expansion jointing materials is necessitated through the shortage of bitumen and has the advantage of reducing the consumption of cork (a constituent of one type of jointing material), which is also in short supply.

Expansion joints should be dispensed with where possible. Where a service road is constructed in hot weather, expansion joints may be omitted, using construction or dummy joints at intervals not greater than 30 ft.

Provision for expansion must be made in roads laid in cold weather, but the present accepted standard of 60 ft. spacing should be increased to 120 ft., with intermediate joints at intervals not greater than 30 ft. These joints may be formed in various ways, for example :—

(i) construction joints in alternate bay construction. It is an advantage to paint the abutting edges of the bays with tar.

(ii) where continuous laying is adopted a dummy joint, roughly half the thickness of the slab in the lower half, may be introduced as the intermediate joint. For this purpose expansion jointing material which has a fibre board base impregnated with waterproofing medium may be used; this is obtainable in widths 3 in. and upwards.

The Jute Controller has drawn attention to the unnecessary use of hessian canvas as an additional wrapping to needlefelt used for pipe insulation. This extra wrapping, involving a consumption of up to 10 oz. of hessian per sq. yd., can be dispensed with in war time.

It is recommended that specifications for insulation with needlefelt should (generally) read as follows :—

"Cold water feed and vent pipes should be wrapped to an average thickness of (usually) 1 in. with needlefelt. Types reinforced with paper or hessian may be used. No additional wrapping of hessian must be used. Where exposed to the weather the insulation shall be protected by wrapping with roofing felt bound with tape."

OFFICIAL NOTIFICATIONS

Control of Whiting, Chalk and Chalk Lime Order.

THE Ministry of Works announce that through Press Notice MOWP/35/42 of November 18 stated that "The Order, which came into force on November 16, 1942, will apply only to those producers, distributors or users of the materials to whom the Minister gives written notice." Any persons who have not received written notice have applied to the Ministry of Works and Planning for licences. Much time and paper will be saved if producers, distributors and users of the specified materials will note that they do not require a licence unless they receive notice (which may be given to them by the Minister at any time) in accordance with Article I of the Order.

Scrap Iron and Steel Prices.

The Minister of Supply has made the Control of Iron and Steel (No. 27) (Scrap) Order, 1942. This Order, which came into force on December 10, fixes maximum prices for the classes of alloy steel scrap not previously separately covered. Copies of the Order may be obtained from H.M. Stationery Office, York House, Kingsway, London, W.C.2, or through any bookseller (price 1d.—S.R. & O. 2493).

Approved Glass Substitutes.

The Minister of Works and Planning has circulated, for the information and guidance of local authorities, revised schedules of "Approved Glass Substitutes" and "Adhesive (Ready Gummed) Anti-Scatter Fabrics and Varnishes" in substitution for those described in the paper on glass, glass substitutes and anti-scatter treatments.

BUILDING FIRM'S CONFERENCE.

A CONFERENCE of the executives of Taylor Woodrow Construction, Ltd., was held at Grosvenor House, Park-lane, on Monday last, for the purpose of exchanging ideas, discussing policy and methods and reviewing the possibilities of increasing production for the war effort. The conference was followed by a dinner, to which a number of guests had been invited. Mr. Frank Taylor, chairman of the company, presided, and among those present were Mr. George Hicks, M.P., Sir Reginald Clarry, M.P., Sir Harold Bellman, and Messrs. R. Coppock, Hugh Beaver, C. E. M. Joad, A. Dunbar, J. Hanson, J. Fenton, A. J. Hill, N. Walls, Oscar Faber, Luke Fawcett, J. Stephenson, T. Pugh, A. E. Aldridge, and others. Among the guests were several American Army officers, who received a particularly cordial welcome. Mr. L. Daniels, the secretary of the company, acted as master of the ceremonies.

The loyal toast having been honoured, Sir Reginald Clarry proposed the toast of "His Majesty's Ministers," to which Mr. George Hicks replied, observing that it would be necessary to retain control over the industry for some time after the war.

Dr. Joad proposed "Our Guests," and Sir Harold Bellman replied. Mr. Coppock proposed "The Company," stressing the great part the industry had played in saving the country after Dunkirk and since. No industry, he said, had responded more readily and efficiently to the call. Mr. Frank Taylor responded.

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CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the head of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING.

DECEMBER 21.

Chatham E.C.—Redecoration and repair at certain schools. B. S.

Newcastle-on-Tyne E.C.—Erection and equipment of large central kitchens on various sites. T. Walling, D. of E., Northumberland-rd., Newcastle-on-Tyne. Dep. 10s.

DECEMBER 23.

Bermondsey T.C. — Construction of three standard hutted nurseries on separate sites. B. S. Dep. £1 1s.

DECEMBER 24.

Larne T.C.—Cleansing station. Town S., Victoria-rd.

DECEMBER 28.

Tamworth Fire Joint Committee.—Construction of static water dam. J. Lewis Bleazard, M.Inst.M.&Cy.E., Consulting E., Municipal Offices.

West Bromwich C.B.—Construction of 22 water reserve tanks in Hy-Rib concrete. B. E. and S. Dep. £1 1s.

DECEMBER 29.

Manchester T.C.—Construction of subdivisional control station and brick unit garages. City Architect. Dep. £1 1s.

DECEMBER 31.

Boston (Lincs) T.C. — Construction of six static water tanks with in-situ concrete floors and precast concrete post and slab walls. B. S.

JANUARY 2.

Pewsey R.D.C.—Two reinforced brick circular tanks. L. J. Timothy, S.

JANUARY 4.

***Beckenham T.C.**—Erection of brick surface shelter, watchroom and a light steel 4-bay garage (supplied free) on concrete foundation with concrete washdown, etc. J. Dove, A.M.Inst.C.E., B. E. and S. Dep. £2.

Worcester T.C.—Preliminary builders' work to convert portion of Hounds-la. school into central kitchen. City E., 22, Bridge-st. Dep. £2 2s.

PAINTING, ELECTRIC LIGHTING, HEATING, ETC.

DECEMBER 28.

Leeds C.T.—Interior and exterior painting, etc., of medical superintendent's house and 6 houses at Meanwood Park Colony. W. S. Cameron, M.Inst.C.E., City E.

Morpeth R.D.C. — Painting of 138 houses at Lynemouth. T. T. Watson, Sanitary Inspector.

ENGINEERING, IRON AND STEEL.

DECEMBER 31.

Merionethshire Rivers Catchment Board.—Construction of sea defence works and reconditioning of river embankments. R. R. Jones, Clerk to the Board, Tremeivion, Talsarnau, Merioneth. Dep. £3 3s.

ROAD, SEWERAGE AND WATER WORKS.

DECEMBER 23.

Wayland R.D.C. — Construction of approx. 145 yds. of 9 in. sewer, three manholes, etc. S., Council Offices, Attleborough, Norfolk.

PUBLIC APPOINTMENTS.

DECEMBER 29.

Manchester University. — Temporary Assistant, Dept. of Architecture. Salary £400-£500. Registrar, The University, Manchester 13.

DECEMBER 29.

***Glamorgan E.C.**—Teacher for Pontypridd Junior Technical School for Building (Boys). F. E. Rees, D. of E., County Hall, Cardiff.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1942

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors]

	Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.
Aberavon	1/11	1/6½	Clitheroe	1/11	1/6½	Isle of Thanet	1/9	1 4½	Saxmundham	1/7½	1/3
Aberdare	1/11	1/6½	Cobham (Surrey)	1/10	1/5½	Isle of Wight	1/8½	1/4½	Scarborough	1/10½	1/5
Abergavenny	1/11	1/6½	Colchester	1/10½	1/5½	Keighley	1/11	1/6½	Scunthorpe	1/11	1/6
Abingdon	1/9½	1/5	Colwyn Bay	1/10	1/5½	Kenilworth	1/11	1/6½	Selby	1/11	1/6
Accrington	1/11	1/6½	Congleton	1/10½	1/5½	Kettering	1/11	1/6½	Sevenoaks	1/9½	1/5
Aldeburgh	1/7½	1/3½	Coventry	1/11	1/6½	Kidderminster	1/10½	1/5½	Sheerness	1/9	1/4½
Aldershot	1/9½	1/5	Cranbrook	1/9	1/4½	King's Lynn	1/9	1/4½	Sheffield	1/11	1/6½
Alfreton	1/11	1/6½	Cranleigh	1/9	1/4½	Kirkham	1/11	1/6½	Shipley	1/11	1/6½
Alnwick	1/10½	1/5½	Crawley	1/9	1/4½	Knowle	1/10½	1/5½	Shoeburyness	1/10½	1/5½
Altrincham	1/11	1/6½	Crewe	1/10½	1/5½	Lancaster	1/11	1/6½	Shoreham	1/10	1/5½
Amble	1/10½	1/5½	Cromer	1/8	1/4	Leamington	1/11	1/6½	Shrewsbury	1/10½	1/5½
Amersham	1/9½	1/5	Crowborough	1/9	1/4½	Leatherhead	1/10	1/5½	Sittingbourne	1/9	1/4½
Ammanford	1/11	1/6½	Cuckfield	1/9	1/4½	Leeds	1/11	1/6½	Skegness	1/10	1/5½
Andover	1/9	1/4½	Darlington	1/11	1/6½	Leicester	1/11	1/6½	Sleaford	1/9½	1/5
Ardingly	1/9	1/4½	Darwen	1/11	1/6½	Leighton Buzzard	1/8	1/4	Slough	1/10	1/5½
Arundel	1/9	1/4½	Daventry	1/9½	1/5	Letchworth	1/10	1/5½	Southampton	1/10½	1/5½
Ascot	1/9	1/4½	Deal	1/9	1/4½	Lewes	1/9	1/4½	Southend-on-Sea	1/10½	1/5½
Ashby-de-la-Zouch	1/11	1/6½	Denbigh	1/10	1/5½	Lichfield	1/10	1/5½	Southport	1/11	1/6½
Ashford (Kent)	1/9	1/4½	Derby	1/11	1/6½	Lincoln	1/11	1/6½	South Shields	1/11	1/6½
Ashford (Middlesex)	1/11	1/6½	Devizes	1/8	1/4	Littlehampton	1/9	1/4½	Spalding	1/9	1/4½
Ashington	1/10½	1/5½	Dewsbury	1/11	1/6½	Liverpool	‡$2/1	¶	Stafford	1/10½	1/5½
Ashtead	1/11	1/6½	Didcot	1/9	1/4½	Llandudno	1/10	1/5½	Staines	1/10	1/5½
Ashton-under-Lyn.	1/11	1/6½	Diss	1/7½	1/3½	Llanelly	1/11	1/6½	Stamford	1/10	1/5½
Aylesbury	1/9	1/4½	Doncaster	1/11	1/6½	London—			Stevenage	1/10	1/5½
Aylsham	1/8	1/4	Dorchester	1/8½	1/4½	12m. radius	*2/0½	1/7½	Stockport	1/11	1/6½
Bagshot	1/9	1/4½	Dorking	1/9½	1/5	12-15m. radius	*2/0	1/7	Stockton-on-Tees	1/11	1/6½
Banbury	1/9	1/4½	Dover	1/9	1/4½	Long Eaton	1/11	1/6½	Stoke-on-Trent	1/11	1/6½
Barnsley	1/11	1/6½	Dovercourt	1/9	1/4½	Longton	1/11	1/6½	Stourbridge	1/11	1/6½
Barnstaple	1/9	1/4½	Driffield	1/9½	1/5	Loughborough	1/11	1/6½	Stourport	1/10½	1/5½
Barrow-in-Furness	1/11	1/6½	Droitwich	1/10½	1/5½	Louth	1/9½	1/5	Stowmarket	1/8	1/4
Barry	1/11	1/6½	Dudley	1/11	1/6½	Lowestoft	1/9	1/4½	Stratford-on-Avon	1/10	1/5½
Basingstoke	1/9	1/4½	Dunstable	1/9½	1/5	Luton	1/10½	1/5½	Stroud	1/10	1/5½
Bath	1/10½	1/5½	Durham City	1/11	1/6½	Macclesfield	1/10½	1/5½	Sunderland	1/11	1/6½
Batley	1/11	1/6½	Eastbourne	1/10	1/5½	Maidenhead	1/10	1/5½	Sutton Coldfield	1/11	1/6½
Beaconsfield	1/9½	1/5	E. Glam. (Mon. Val.)	1/11	1/6½	Maidstone	1/9½	1/5	Swaffham	1/7½	1/3½
Beccles	1/7½	1/3½	East Grinstead	1/9	1/4½	Malvern	1/9½	1/5	Swanage	1/9	1/4½
Bedford	1/10½	1/5½	Edenbridge	1/9	1/4½	Manchester	1/11	1/6½	Swansea	1/11	1/6½
Berkhamsted	1/9	1/4½	Ely	1/8	1/4	Manningtree	1/8	1/4	Swindon	1/9½	1/5
Berwick	1/10½	1/5½	Epping	1/11	1/6½	Mansfield	1/11	1/6½	Tamworth	1/10½	1/5½
Beverley	1/11	1/6½	Exeter	1/10½	1/5½	March	1/8	1/4	Taunton	1/9½	1/5
Bexhill-on-Sea	1/9½	1/5	Exmouth	1/9½	1/5	Margate	1/9	1/4½	Tenterden	1/9	1/4½
Bideford	1/9	1/4½	Fakenham	1/8	1/4	Market Harborough	1/10	1/5½	Thames Haven	1/11	1/6½
Biggleswade	1/9	1/4½	Falmouth	1/9½	1/5	Matlock	1/9½	1/5	Thetford	1/8½	1/4½
Billericay	1/8½	1/4½	Fareham	1/10	1/5½	Melton Constable	1/7½	1/3½	Thorpe Bay	1/10½	1/5½
Birchington	1/9	1/4½	Faversham	1/9	1/4½	Melton Mowbray	1/10	1/5½	Todmorden	1/11	1/6½
Birkenhead	‡$2/1	¶	Felixstowe	1/10	1/5½	Merthyr	1/11	1/6½	Tonbridge	1/9½	1/5
Birmingham	†1/11	1/6½	Filey	1/9½	1/5	Middlesbrough	1/11	1/6½	Torquay	1/10½	1/5½
Bishop Auckland	1/11	1/6½	Fleetwood	1/11	1/6½	Middleton	1/11	1/6½	Totnes	1/9	1/4½
Bishop's Stortford	1/10	1/5½	Flint	1/11	1/6½	Middlewich	1/10½	1/5½	Trowbridge	1/8	1/4
Blackburn	1/11	1/6½	Folkestone	1/9	1/4½	Milford Haven	1/9½	1/5	Truro	1/8½	1/4½
Blackpool	1/11	1/6½	Frinton-on-Sea	1/9	1/4½	Morecambe	1/11	1/6½	Tunbridge Wells	1/9½	1/5
Blyth	1/11	1/6½	Frome	1/8	1/4	Morley	1/11	1/6½	Uppingham	1/10½	1/5½
Bognor Regis	1/9	1/4½	Gainsborough	1/10	1/5½	Mundesley	1/8	1/4	Uttoxeter	1/10	1/5½
Bolton	1/11	1/6½	Gateshead	1/11	1/6½	Nantwich	1/10½	1/5½	Wakefield	1/11	1/6½
Bournemouth	1/10	1/5½	Gillingham (Kent)	1/10	1/5½	Nelson	1/11	1/6½	Walsall	1/11	1/6½
Bracknell	1/9	1/4½	Glossop	1/11	1/6½	Newark-on-Trent	1/10½	1/5½	Walsden	1/11	1/6½
Bradford	1/11	1/6½	Gloucester	1/10½	1/5½	Newbury	1/9	1/4½	Walton-on-Naze	1/9	1/4½
Bradford-on-Avon	1/8	1/4	Godalming	1/9	1/4½	Newcastle-on-Tyne	1/11	1/6½	Ware	1/10½	1/5½
Braintree	1/9	1/4½	Goole	1/11	1/6½	Newcastle-u.-Lyme	1/11	1/6½	Warminster	1/8	1/4
Brentwood	1/10½	1/5½	Gosport	1/10½	1/5½	New Forest	1/9	1/4½	Warrington	1/11	1/6½
Bridgwater	1/9½	1/5	Grantham	1/10	1/5½	Newmarket	1/9	1/4½	Warwick	1/11	1/6½
Bridlington	1/10½	1/5½	Gravesend	1/10½	1/5½	Newport, Mon.	1/11	1/6½	Wellington R.D.	1/10½	1/5½
Brighouse	1/11	1/6½	Great Yarmouth	1/9	1/4½	Newport Pagnell	1/9	1/4½	Welwyn	1/10	1/5½
Brighton	1/10	1/5½	Grimsby	1/11	1/6½	Northampton	1/11	1/6½	Welwyn Gar. City	1/11	1/6½
Bristol	1/11	1/6½	Guildford	1/9	1/4½	Norwich	1/11	1/6½	Wells (Norfolk)	1/7½	1/3½
Broadstairs	1/9	1/4½	Guilsborough	1/9½	1/5	Nottingham	1/11	1/6½	West Bromwich	1/11	1/6½
Bromsgrove	1/10½	1/5½	Halifax	1/11	1/6½	Nuneaton	1/11	1/6½	Westcliff-on-Sea	1/10½	1/5½
Buckley	1/11	1/6½	Hatfield	1/11	1/6½	Oakham	1/9½	1/5	Weston-super-Mare	1/10	1/5½
Bungay	1/7	1/3½	Harpenden	1/11	1/6½	Oldham	1/11	1/6½	Weybridge	1/10	1/5½
Burnham-on-Crouch	1/7½	1/3½	Harrogate	1/10	1/5½	Ormskirk	1/11	1/6½	Weymouth	1/9	1/4½
Burnley	1/11	1/6½	Hartlepools	1/11	1/6½	Oxford	1/10½	1/5½	Whitby	1/10	1/5½
Burslem	1/11	1/6½	Harwich	1/9	1/4½	Oxted	1/9½	1/5	Whitstable	1/9	1/4½
Burton-on-Trent	1/11	1/6½	Haslemere	1/9	1/4½	Paignton	1/10½	1/5½	Widnes	1/11	1/6½
Bury	1/11	1/6½	Hastings	1/9	1/4½	Peterborough	1/10½	1/5½	Wigan	1/11	1/6½
Bury St. Edmunds	1/8½	1/4½	Hatfield	1/10½	1/5½	Plymouth	1/11	1/6½	Wigton	1/9½	1/5
Buxton	1/10½	1/5½	Haywards Heath	1/9	1/4½	Pontefract	1/11	1/6½	Willington	1/11	1/6½
Byfleet	1/9½	1/5	Hednesford	1/10½	1/5½	Pontypridd	1/11	1/6½	Wilmslow	1/11	1/6½
Cambridge	1/11	1/6½	Hemel Hempstead	1/10	1/5½	Port Talbot	1/11	1/6½	Winchester	1/9½	1/5
Canterbury	1/9	1/4½	Henley-on-Thames	1/9	1/4½	Portsmouth	1/10½	1/5½	Windermere	1/9½	1/5
Cardiff	1/11	1/6½	Hereford	1/9	1/4½	Preston	1/11	1/6½	Windsor	1/10	1/5½
Carlisle	1/11	1/6½	Herne Bay	1/9	1/4½	Pulborough	1/9	1/4½	Wisbech	1/8½	1/4½
Carnforth	1/11	1/6½	Hertford	1/10½	1/5½	Ramsgate	1/9	1/4½	Witham	1/9	1/4½
Castleford	1/11	1/6½	Heysham	1/11	1/6½	Reading	1/10½	1/5½	Woking	1/9½	1/5
Caterham	1/11	1/6½	Hitchin	1/10	1/5½	Redditch	1/10½	1/5½	Wokingham	1/9	1/4½
Chard	1/8	1/4	Hoddesdon	1/10½	1/5½	Redhill	1/9½	1/5	Wolverhampton	1/11	1/6½
Chatham	1/10	1/5½	Holt (Norfolk)	1/7½	1/3½	Ripon	1/9½	1/5	Woodbridge	1/8½	1/4½
Chelmsford	1/10½	1/5½	Horley	1/9	1/4½	Rochdale	1/11	1/6½	Worcester	1/10½	1/5½
Cheltenham	1/10	1/5½	Horsham	1/9	1/4½	Rochester	1/10	1/5½	Workington	1/9½	1/5
Chepstow	1/10½	1/5½	Horwich	1/11	1/6½	Rugby	1/11	1/6½	Worksop	1/10½	1/5½
Chertsey	1/10	1/5½	Huddersfield	1/11	1/6½	St. Albans	1/10½	1/5½	Worthing	1/9	1/4½
Chester	1/11	1/6½	Hull	1/11	1/6½	St. Helens	1/11	1/6½	Wrexham	1/10½	1/5½
Chesterfield	1/11	1/6½	Hunstanton	1/8	1/4	St. Neots	1/8½	1/4½	Wroxham	1/8½	1/4½
Chichester	1/9	1/4½	Huntingdon	1/8½	1/4½	Saffron Walden	1/8	1/4	Wycombe	1/10	1/5
Chorley	1/11	1/6½	Ilfracombe	1/9	1/4½	Salisbury City	1/8½	1/4½	Wymondham	1/8	1/4
Cirencester	1/8½	1/4½	Ingatestone	1/9½	1/5	Salisbury Plain	1/10	1/5½	Yeovil	1/9½	1/5
Clacton	1/9	1/4½	Ipswich	1/10½	1/5½	Sawbridgeworth	1/9½	1/5	York	1/11	1/6
Cleveleys	1/11	1/6½									

* Painters ½d. less than other Craftsmen. † Plus 2d. per working day. ‡ Plasterers 2/1½.
¶ Tradesman's Labourers, 1/7½. Navvies and General Labourers, 1/6½.
§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money.
NOTE.—Carpenters and Joiners in all Towns and Districts (other than Birkenhead and Liverpool) receive 2d. per day Tool Allowance.
For Building Trade Wages in Scotland, see page 538

PRICES CURRENT OF MATERIALS*

Note: Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. The prices of soft woods are for cash on delivery. At present linseed oil and genuine spirits of turpentine can only be supplied in cans in small quantities.

BRICKS, &c.

	£ s. d
First Hard Stocks	4 13 0
Second Hard Stocks	4 6 0
Mild Stocks	3 13 0
Single Rough Stocks	3 7 0
Common Stocks	2 17 6

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job. *In addition*, there will be the Levy under the Bricks (Charges) Order, 1942, of 3s. per 1,000.

2½ in. Phorpres. A discount of 6d. 1,000 only monthly account.	King's Cross Station per 1,000 s. d.	To sites in W.C. District per 1,000 s. d.
Pressed	56 9	63 3
Keyed	58 9	65 3
Single Bullnose	76 9	83 3
Rustics	76 9	83 3
Whites	77 3	83 3

	£ s. d.
White Midhurst Best selected (delivered London site)	5 10 0
Best blue Pressed Staffs. (London Stns.)	11 12 0
Do. Bullnose (London Stns.)	12 2 0
Blue Wire Cuts (London Stns.)	10 9 6

Best Stourbridge Fire Brick (London Stns.):—

£ s. d.		£ s. d.
2½ in. 10 0 0	3 in.	12 0 0

GLAZED BRICKS. (London Stns.)

Best White Ivory and Salt Glazed	D'ble Str'tch'rs	38 10 0
	D'ble Headers	35 10 0
Stretcher 30 0 0	One side&two ends	39 10 0
Headers 29 10 0	Two sides&one end	40 10 0
Quoins, Bullnose and 4½ in. Flats 36 10 0	Splays and Squints	38 0 0

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze. £3 10s. extra over white.

ADD LEVY ON BRICKS. 3/- per 1,000 except Glazed Bricks.

PARTITION SLABS.

Delivered on site London Area.

"PHORPRES" HOLLOW PARTITION BLOCKS.

	s. d.		s. d.
2" per yd. sup.	2 8	3" per yd. sup.	3 6
2½ " "	2 11	4" " "	3 10

CLINKER CONCRETE.

2" per yd. sup.	1 11	3" per yd. sup.	2 6
2½ " "	2 3	4" " "	3 6

CRANHAM TERRA COTTA.

Size 12 x 9 x 2" per yd. super	2 8
Size 12 x 9 x 2½ " "	2 11
Size 12 x 9 x 3" " "	3 6
Size 12 x 9 x 4" " "	3 10

HEMPSTEAD—KEYED TWO SIDES.

12" x 9" x 2"	2 8	12" x 9" x 3"	3 6
12" x 9" x 2½"	2 11	12" x 9" x 4"	3 10

Per yard super d/d. Free on site, London.

Plus 2d. for smooth one side, and 4d. for smooth both sides.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube — s. 3 d. 3½

BOX STONE—RANDOM BLOCK—
Free on rail at Seaton Station per ft cube — 2 3
Delivered free on rail Nine Elms, S.R. " — 3 1½
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.

PORTLAND STONE—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube — 4 7
Do. do. delivered on road waggons as above stations per ft. cub. — 4 7
White basebed, 3d. per ft. cube extra.
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ¼d. beyond 30 ft.

HOPTON-WOOD STONE—
F.O.R. Quarries, Wirksworth, Derbyshire, s. 13 d. 2
Random blocks from 10 ft. and over P.ft.cb.
Sawn two sides — 26 11
Sawn three or four sides — 31 11

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station, London.
6 in. sawn two sides landings to sizes (under 30 ft. super) per ft. super — 5 6
6 in. rubbed two sides, ditto " — 6 3
3 in. sawn two sides slabs (random sizes) " — 2 7
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) " — 1 8½
1¼ in. to 2 in. ditto " — 1 4½

HARD YORK—
Delivered at any Goods Station, London.
Scrappled random blocks per ft. cube — 6 10
6 in. sawn two sides landings to sizes (under 40 ft. super) per ft.super — 5 7½
6 in. rubbed two sides, ditto " — 6 9
4 in. sawn two sides slabs (random sizes) " — 3 5
3 in. ditto ditto " — 2 8
2 in. self-faced random flags per yd. super — 8 9

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 7s. 6d. Moulded, 8s. 6d. Small section cills and copings, 11s.

SAND.

Thames Ballast	10s. 0d. per yd.	delivered 2 miles radius Paddington.
Pit Ballast	9s. 6d. " "	
Pit Sand	12s. 0d. " "	
Washed Sand	13s. 0d. " "	
¼ in. Shingle	10s. 6d. " "	
¼ in. Broken Brick	16s. 0d. " "	
Pan Breeze	10s. 0d. " "	

CEMENT.

Best British Portland Cement. Standard Specification, delivered London area. £ s. d.

6 ton loads and upwards site per ton	2 11 0
1 ton to 6 tons site	2 14 0
Alongside Vauxhall in 80 ton lots	2 8 6
"Ferrocrete" Rapid Hardening Cement—	
6 ton loads and upwards site	2 17 0
1 ton to 6 tons site	3 0 0
Alongside Vauxhall in 80 ton lots	2 14 6
"Aquacrete" Water Repellent, "Blue Circle" cement, 30s. per ton on ordinary "Blue Circle" prices.	
"Colorcrete" Nos. 1 and 2. Coloured rapid Hardening Portland Cement in 6 ton lots	4 11 0
"Colorcrete" not rapid hardening, according to colour, from £7 to £15 10s. per ton.	
"Snowcrete" White Portland Cement (in free paper bags)	10 5 0
"417" Cement (Ultra Rapid Hardening) Delivered Site London Area in 6 tons lots and upwards	3 11 0
Plus packages at current prices.	
Super Cement (Waterproof), bags extra	4 1 0

NOTE.—Jute sacks charged at 35s. 6d. nett per ton (20 sacks) for quantities of or exceeding one ton.
Less than one ton 1s. 9½d. nett each.
Credit 1s. 6d. nett each when returned in good condition within two weeks.

	£ s. d.		£ s. d.
Romance ment	8 10 0	Keene's Cement, White	7 0 0
Parian Cement	7 0 0	" " Pink	6 10 0

Cemen tone Colours for cement according to tints per cwt. from £3 5s. 0d.

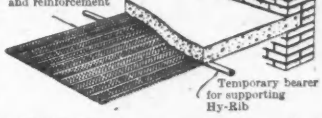
SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	45 5 0	18 by 10	24 0 0
22 by 12	37 17 6	18 by 9	22 12 6
22 by 11	34 2 6	16 by 10	21 10 0
20 by 12	33 0 0	16 by 8	16 12 0
20 by 10	30 5 0		

HY-RIB is the answer to your centering problem

Use the reinforcing steel as centering for the slabs



HY-RIB is a centering for concrete during construction

HY-RIB is a reinforcement for the structural slab

Over ***11,000,000*** *square feet of HY-RIB combined centering and reinforcement has been used in wartime buildings*

For the guidance of Constructional Staffs we provide working drawings for particular applications of Hy-Rib.

HY-RIB
COMBINED CENTERING AND REINFORCEMENT

HY-RIB SALES, 6 COLLINGHAM GARDENS EARLS COURT, S.W.5. 'PHONE: FROBISHER 8141

4-3464

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	4 2 6	Sirapite, Coarse	4 8 6
" White	4 10 0	" Finish	4 14 6
Pioneer	4 3 6		

Above prices for 4-ton loads and over London Area.

Best Ground Blue		Grey Stone Lime	3 1 0
Lias Lime	3 7 6	Chalk Lime	3 1 0
Granite Chippings	1 15 0	Hair per cwt.	3 15 0

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d. if returned in good condition within three months, carriage paid.
Stourbridge Fireclay in paper bags, £2 12s. 6d. in 6-ton lots at railway depot.

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons Per 1,000 f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£5 15 0
Ditto hand-made ditto	6 18 6
Ornamental ditto	7 5 0
Hip and valley tiles (per dozen) Hand-made	0 14 0
Machine-made	0 13 6

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality.	s. d.		Foot cube. £ s. d.
Dry English Wainscot Billets	16 0	to	0 18 0
Dry Slavonian Billet Wainscot	17 0	to	1 0 0
Dry Cuba Mahogany logs	21 0	to	1 4 0
Square-edged Honduras Mahogany			0 16 6
Log Cut Honduras Mahogany			0 17 6
American Figured Oak			0 13 0
American Plain Oak			0 12 6
Jap. Figured Oak			0 13 0
Jap. Plain Oak			0 12 6
Teak			0 15 6
American Whitewood			0 12 6
African Whitewood			0 8 0
African Mahogany			0 11 0
Australian Walnut			0 19 0
Australian Silky Oak			0 12 6
Best Scotch glue per cwt.			5 0 0
Liquid glue per gallon			1 2 0

SOFT WOOD.

MERCHANTABLE BRITISH COLUMBIAN PINE

	Minimum. £ s. d.	Maximum. £ s. d.
Scantlings in imported sizes, 2 in. by 3 in. to 4 in. by 11 in.	43 10 0	53 0 0

PLANED BOARDS.

PRIME CLEAR BRITISH COLUMBIAN PINE.

	Per standard. £ s. d.
1 in. by 11 in. / 1 in. by 9 in.	67 10 0

	Per square. s. d.
1 in. plain edge flooring	53 0
1¼ in. ditto	66 6
1 in. tongued and grooved	53 0
1¼ in. ditto	66 6

MATCHING.

	Per square. s. d.
¾ in.	37 6
¾ in.	42 0
1 in.	55 0

PLUMBERS' BRASS WORK.

Delivered in London. M.O.H.

S.D. BIBCOCKS, CRUTCH HEAD, FOR IRON
½ in. ¾-in.
30/- 44/6 per doz.

TOILET BIB COCKS FOR IRON.
½ in. ¾ in.
42/- 60/- per doz

S.D. STOP COCKS FOR IRON.
¼ in. ⅜ in. 1 in. 1¼ in. 1½ in. 2 in.
29/6 45/- 81/6 195/- 272/- 453/- per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.
¼ in. ⅜ in. 1 in. 1¼ in. 1½ in. 2 in.
45/- 77/6 123/- 240/- 372/- 624/- per doz.

DOUBLE NUT BOILER SCREWS.
¼ in. ⅜ in. 1 in. 1¼ in. 1½ in. 2 in.
5/6 6/8 11/- 24/- 36/- 56/- per doz.

HEAVY CROYDON BALL VALVES.
¼ in. ⅜ in. 1 in. 1¼ in. 1½ in.
36/- 65/- 98/- 195/- 264/- per doz.

CAPS AND SCREWS.
1¼ in. 1½ in. 2 in. 3 in. 3½ in. 4 in.
11/9 14/5 21/6 37/9 54/- 59/6 per doz.

BRASS SLEEVES.
1¼ in. 2 in. 3 in. 3½ in. 4 in.
10/9 13/6 25/- 37/- 46/- per doz.

LEAD TRAPS WITH BRASS CLEANING SCREWS
1¼×6 lbs. 1½×6 lbs. 2×7 lbs. 3×7 lbs.
Lead P. 26/- 34/- 55/- 92/- per doz.
Lead S. 34/- 41/- 67/ 115/- per doz.

SOLDER.—Plumbers', 1/5. Tinmen's, 1/9. Blow pipe, 2/- per lb.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, no necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(contd.)

METALS.

JOISTS, GIRDERS, &c., to LONDON STATION PER TON—

	£	s.	d.
R.S. Joists, cut and fitted	£23	10	0
Plain Compound Girders	26	0	0
Stanchions	28	10	0
In Roof Work	33	10	0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£	s.	d.	Diameter.	£	s.	d.
¼ in.	23	0	0	⅜ in. to ½ in.	21	10	0
⅝ in.	22	0	0	⅝ in. to 2½ in.	21	0	0

WROUGHT TUBES AND FITTINGS.

Deliveries from works.

Deliveries from London stock further 2½ % gross.

	Tubes. ½"/6"	Tubulars. ½"/6"	10/17 19/24	Flanges. ½"/2"	2½"/6"
	%	%	%	%	%
Light weight	51¼	—	47½	51	57½
Heavy weight	44	44	39½	41	49½
Galv.lightweight	40½	—	38½	39½	48½
Galv.heavyweight	31	31	31	29½	41

Tubes and tubulars sizes ½"/⅜" inclusive, charged extra of 5% less gross.

Fittings. Figs. 25/34 5% less gross discount.

Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS—London Prices ex Works. per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in.	1/5½	1/2½	4½d.
3½ in.	1/7	1/4	4½d.
4 in.	1/7	1/6	6½d.
4½ in.	1/8½	1/8½	7½d.
5 in.	2/0½	2/0	9d.

O.G. GUTTERS.

3 in.	1/10½	1/7½	5d.
3½ in.	2/1½	1/7½	6½d.
4 in.	2/1½	1/8½	7½d.
4½ in.	2/2½	1/11½	8½d.
5 in.	2/8½	2/3	10½d.

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe	Bends. Stock angles.	Branches.
2 in.	2/2½	1/5½	2/2
2½ in.	2/3½	1/8½	2/7½
3 in.	2/8½	2/1½	3/2
3½ in.	3/2½	2/6½	3/7½
4 in.	3/8½	3/0½	4/5

NETT PRICES.

Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices, ex Stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches.
2 in.	3/9½	2/7½	3/2
2½ in.	4/5	2/10½	3/11½
3 in.	4/9	3/2	4/8½
3½ in.	4/10½	3/11½	5/5½
4 in.	5/3½	4/5	6/3½

L.C.C. COATED DRAIN PIPE.

	Pipe.	Bends.	Branches.
3 in. per yd. in 9 fts.	5/5	6/3	9/11
cwt. qr. lbs.			
4 in. 1 1 20	7/11	7/1	12/6
5 in. 1 2 22	9/7	12/9	19/3
6 in. 1 3 6	11/5	14/8	25/6

Gaskin, 75/- per cwt.

	Per ton basis in London. £	s.	d.
IRON.—Staffordshire Crown, Merchant quality	18	7	6
IRON.—Staffordshire Marked Bars	19	7	6
Mild Steel Bars	19	15	0
Mild Steel Hoops	21	10	0
	Ex Merchant's Stock, per ton (two-ton lots).		
Soft Steel Sheets, C.R. and C.A.—			
20 gauge	24	17	6
24 gauge	25	2	6
26 gauge	25	17	6
Galvanised Corrugated Sheets, 6 ft. to 9 ft.			
20 gauge	27	0	0
24 gauge	27	10	0
26 gauge	28	15	0
Galvanised Flat Sheets, C.R. and C.A.—			
20 gauge	28	10	0
24 gauge	29	0	0
26 gauge	30	5	0
	Per ton. £	s.	d.
Cut Nails, 3 in. and up	28	10	0

ALL NETT.

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 2s. 4d. to 2s. 7d. per foot super.

PAINTS, &c.

	£	s.	d.
Raw Linseed Oil (5 galls.) .. per gallon	0	5	9
Boiled Linseed Oil (5 galls.) .. "	0	6	0
Genuine Ground English White Lead, per cwt.	3	11	3
Genuine White Lead Paint, 14 lb. tins free, per cwt.	4	15	6
Genuine Red Lead. "	2	18	0
Linseed Oil Putty (Kegs extra) .... "	1	3	3
Size XD quality ..... ftn.	0	4	9

Turpentine substitute can be obtained and prices vary according to quality from 3/8 gallon upwards.

	£	s.	d.
SNOWCEM CEMENT PAINT ..... per cwt.	2	16	0
C.M.C. CAMOUFLAGE PAINT ..... "	2	16	0

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from October 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A1	A2	A3	B	B1
Craftsmen.....	1/11½	1/11	1/10½	1/10	1/9½	1/9
Labourers	1/6	1/5½	1/5½	1/5	1/4½	1/4½

Aberdeen .....A	Dumfriesshire A2	Inverness.....*	Perthshire A2
Ayrshire .....A	Dundee .....A	Inverurie A1	Peterhead A1
Banff .....B	Dunoon .....A	Kincardineshire A2	Renfrewshire .....A
Berwickshire A2	East Fife.....A	Kinross-shire .....A	Rothesay .....A
Bridge of Allan .....A	East Lothian .....A	Lanarkshire .....A	Roxburghshire A2
Broughty Ferry .....A	Edinburgh .....A	Midlothian .....A	St. Andrews .....A
Clackmannanshire ..A	Fifeshire .....A	Monifieth .....A	Selkirkshire A2
Doune .....A	Forfarshire A2	Moray and Nairn ....B	Stewartry A2
Dunblane .....A	Glasgow .....A	Newport .....A	Stirlingshire .....A
Dumbartonshire ....A	Greenock .....A	Peeblesshire A2	Stornoway A2
Dumfries.....A1	Hamilton .....A	Perth .....A	Tayport.....A
			West Lothian .....A

*This town has its own rates: Masons, 1/8½; Carpenters, 1/8½; Slaters, 1/8½; Plumbers, 1/9; Plasterers, 1/9½, but 1/10 is paid owing to the scarcity at present; Painters, 1/8½ and Labourers, 1/4

The information given in this table is copyright. Rates of wages in England and Wales are given on page 536.

VARNISHES, &c.

		Per gallon. £	s.	d.
Oak Varnish	Outside	0	16	0
Fine do.	"	0	18	0
Fine Copal	"	1	0	0
Pale Copal	"	1	2	0
Pale Opal Carriage	"	1	6	0
Best do.	"	1	14	0
Floor Varnish	Inside	1	0	0
Fine Pale Paper	"	1	0	0
Fine Copal Cabinet	"	1	4	0
Fine Copal Flatting	"	1	2	0
Hard Drying Oak	"	1	0	0
Fine Hard Drying Oak	"	1	1	6
Fine Copal Varnish	"	1	2	6
Pale do.	"	1	14	0
Best do.	"	1	4	6
Best Japan Gold Size	"	1	14	6
Best Black Japan		0	12	0
Oak and Mahogany Stain (water)		0	14	0
Brunswick Black		0	9	6
Berlin Black		0	16	0
Knotting (patent)		0	17	0
French and Brush Polish		0	14	0
Liquid Dryers in Terebene		0	11	0
Cuirass Black Enamel		0	9	0

LEAD, &c.

(Delivered in London.)	Per ton. £	s.	d.
LEAD.—Sheet, English, 4 lb. and up	38	0	0
Pipe in coils	38	10	0
Soil pipe	42	10	0
Compo pipe	47	10	0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills..... per ton £18 0 0.

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ENGLAND'S LARGEST GLAZING CONTRACTORS

THE SCOTTISH BUILDER

NEW BUILDING

GLASGOW.—Plans prepared for alterations and additions for the Y.M.C.A., the architect being J. Austin Laird, Castle-bldgs., 55, West Regent-st., Glasgow.

Facts About the A.B.T.

A booklet explaining the work of the Association of Building Technicians (lately the Association of Architects, Surveyors and Technical Assistants) has been issued from 113, High Holborn, W.C.1.

Builders' Merchants' Depot, Canterbury.

Messrs. Henry J. Greenham (1929), Ltd., have acquired premises at Lion Wharf, 10-12, Northgate-street, Canterbury, Kent (Tel. : Canterbury 4451 and 4452), where at they will be carrying large stocks of road and building materials.

GLASS.

SHEET GLASS, ORDINARY GLAZING QUALITY CUT SIZES.

	Per ft. super. d.
18 oz.	3½
24 oz. Clear or "R" quality	4½
26 oz.	5½
32 oz.	7½

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

Over 500 ft. super of all kinds.

	Per ft.
Rolled plate, ¼ in.	5½d.
Rough cast double rolled, ¼ in.	6½d.
Rough cast double rolled, ½ in.	6½d.
Figured rolled, and Cathedral, white	6½d.
Figured rolled and Cathedral, tinted	9½d.
Rolled Sheet	6d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	10½d.

Rolled plate is the same price as rough cast double rolled.

	Per ft. s.	d.
Wire Rolled, ¼ in. thick	0	9½
Wire Cast, ¼ in. thick	0	9½
Georgian Wired Cast	0	10
"Calorex" Sheet, 21 oz.	2	6
" " 32 oz.	4	0
" Cast, ¼ in. thick	0	10
" " ⅜ in. thick	1	0
" " ½ in. thick	1	2
Non Actinic Glass, ¼ in. thick	0	9½
" " " ⅜ in. thick	1	0
" " " ½ in. thick	1	2

"VITA" GLASS.

	Per ft. s.	d.
"Vita" Plate Glass, about ⅛ in. thick—		
To 7 ft. super	5	0
Over 7 ft. super	7	6
"Vita" Sheet Glass, about 18/20 oz.	2	0
Cathedral "Vita" Glass :		
¼ in. thickness	2	0
⅜ in. "	3	0
⅛ in. Georgian Wired "Vita" Glass	3	6

GLASS BRICKS.

	s.	d.	
P.B. 1—8 in. × 4⅞ in. × 3⅜ in.	2	9	each nett
P.B. 2—5⅛ in. × 5⅛ in. × 3⅜ in.	2	6	"
P.B. 3—7⅛ in. × 7⅛ in. × 3⅜ in.	3	6	"
P.B. 32—7⅛ in. × 7⅛ in. × 3⅜ in.	3	6	"

Radiused Corner Bricks to match up with—

P.B. 2	4	6	each nett
P.B. 3	6	0	"
P.B. 32	6	0	"

A.R.P. SCHEMES

LONDON.

Kensington.—B.C. accepted following tenders: For alterations and strengthening works at wardens' post, R. Mansell, Ltd., £214; further strengthening of report centre, H. B. Nixon, £484; strengthening work at communal mews shelters, J. M. Tankel & Co.

PROVINCIAL.

Gateshead.—T.C. to erect blast wall at maternity unit at General Hospital, at £267.—T.C. to build static water basins, at £1,898.

Liverpool.—T.C. to erect baffle walls protection at Carnegie welfare centre.—T.C. submitted scheme to B.E. and Ministry of Home Security for erection of 26 special surface shelters at schools.

Newcastle-on-Tyne. — Shelters to be erected at County Hall. Plans by W. W. Tasker, County Architect, County Hall.

Redcar.—North Riding C.C. to erect shelter at first-aid post, at £263. Plans by County Architect, County Hall, Northallerton.

Stretford.—T.C. propose adaptation of shelters and the installation of cooking and ancillary equipment for shelter feeding; adaptation of premises for sub-fire station.

Sunderland.—A. Whyman, Ltd., to erect shelter.—T.C. to erect two garages at Redby school, at £238.—E.C. to erect shelter at St. Benet's R.C. school, at £185.

Workington.—T.C. propose shelters for Cross-st. nursery, and at nursery at Church-rd., Harrington.

CURRENT AND PROPOSED NEW BUILDINGS

Bacup.—T.C. propose erection of passenger 'bus shelter at South-st.

Barnsley. — Board of Management of Beckett's hospital propose extensions.

Bury.—Board of Governors of Bury Convent High school, Manchester-rd., propose extensions.

Coventry.—Public Health Committee to adapt premises as Nurses Hostel.

Dudley.—Board of Management of Dudley Dispensary and Badley District Nursing Home propose extensions.

Gateshead.—B.E. prepared plans for alterations to nurses' training school.

Gateshead.—T.C. received sanction to erect brick building as extension to nursery at Holy Trinity Vicarage, at £1,050. Plans by F. H. Patterson, B.E.

Lancashire.—E.C. propose adaptation of premises at Long View, Huyton, nr. Liverpool, for branch library.—E.C. received approval of B.E. for erection of prefabricated building at Huyton Long View school.

Manchester.—T.C. approved: Structural alterations to "Mowers' Arms," Moston, for Cornbrook Brewery Co., Ltd., E. A. Newton, architect, Rutherford-chbrs., Bow-la.; additions to works, McCutcheon & Walsingham (L.), architects, 1180a, Chester-rd., Stretford; additions to brewery, Hulme, for Cornbrook Brewery Co., Ltd., E. A. Newton (L.), architect.

Manchester.—P.H.C. propose prefabricated building for day nursery at Ardwick, at £1,890.

Mansfield.—T.C. approved: Additions to workshops, Sherwood Village Settlement, Southwell-rd., for Nottinghamshire C.C. Plans by E. W. Roberts (A.), County Architect, Shirehall, Nottingham.

Mitcham.—Regional architect approved plans for day nursery at Colliers Wood.

Newcastle-on-Tyne. — Plans approved: Lavatory accommodation, for C.W.S. (C.W.S. Architects' Dept., 90, Westmorland-rd., Newcastle-on-Tyne); alterations and lavatory accommodation, for Newcastle-on-Tyne and Gateshead Gas Co. (architects: Cackett, Burns Dick & McKellar, 21, Ellison-pl., Newcastle.

Newcastle-under-Lyme. — Council for Social Service propose youth centre at Assembly Rooms.

Preston.—Board of Governors of Preston Catholic College, Winckley-sq., propose extensions.

Salford.—T.C. approved erection of shelters for Transport Committee: Health Committee propose eight more nurseries.

Scarborough.—T.C. to carry out repairs to Scalby Mills hotel.

Spenborough.—U.D.C. decided to proceed with alterations to public abattoir, Cleckheaton.

Stockport. — T.C. propose day nursery at Adswood school.

Sunderland.—T.C. to carry out repairs to Vilette-rd. school, clinic, Hendon-rd. school, and Education Offices, at £1,109. Plans by Education Architect.

Wigan. — T.C. approved: Additions to bakery, for Hall Bros.

Workington.—T.C. propose additions at three nurseries.

BRITISH RESTAURANTS AND CANTEENS

Batley.—T.C. propose additional B.R. at Commercial-st. Plans by T. Mossop, B.S.

Dewsbury.—T.C. propose a cash and carry feeding depot at Thornhill.

Durham. — Edwin M. Lawson, Barras-bldgs., Barras Bridge, Newcastle-on-Tyne, is architect for canteen at Bearpark colliery.

Gateshead.—T.C. to provide temporary canteen facilities at central depot for Transport Dept.

Kidderminster.—E.C. received approval of B.E. for school canteens, at £4,000.

Lancashire.—E.C. propose school feeding centres at Kirkby, Prescot, Longton, Poulton-le-Fylde, Waterloo-with-Seaforth and the Park school for Girls, at £2,206. Plans by L. Evans, County Architect, County Offices, Preston.

Manchester.—T.C. approved: Conversion of two houses into works canteen and trailer pump-house. Plans by Drury & Gomersall, Imperial-bldgs., Oxford-rd., Chorlton-on-Medlock.

Newcastle-on-Tyne. — E.C. to erect, in prefabricated concrete, large central kitchens on various sites. Plans by F. Harvey, Education Offices.

North Riding.—E.C. to prepare schemes for central kitchens at Richmond and Thirsk. Plans by J. White, County Hall, Northallerton.

Ormskirk.—District E.C. propose erection of prefabricated hut for feeding centre at Derby-st. schools.

Reading.—Town & County Planning Committee approved B.R. at Gosbrook-rd.

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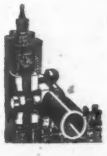

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TENDERS

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Tuesday morning.

Tenders for A.R.P. work will be found under "A.R.P. Schemes."

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modification.*
¶ Denotes *accepted by H.M. Government departments.*

Camberwell.—For nursery at St. Mary's-rd.: *J. W. Ashdown, Ltd., 21, Besson-st., New Cross, £1,095; nursery at Lowth-rd.: *J. W. Ashdown, Ltd., £1,769; nursery at Kinsale-rd.: *J. W. Ashdown, Ltd., £1,769.

Fareham.—Titchfield sewerage contract No. 2: *Sadler & Co., Downside-rd., Winchester, £1,246.

Gateshead.—Repairs to nurses' home at Bensham Hospital, for T.C.: *Elliott Bros., Otterburn-ter., Newcastle-on-Tyne, £360.

Greenock. — For erection of canteen. Will J. B. Wright & Kirkwood, architects, Carlton House, Douglas-st., Glasgow. Excavation, brick and building works, etc.: *J. & R. Kirk, Ltd., Greenock.

Hartford.—Miners' canteen: *Sowerby's (Contractors), Ltd., Framlington-pl., Newcastle-on-Tyne.

¶London (Air Ministry).—Works contracts for the week ended December 12. Value £500 and over for works services.

Electrical work: Watshams, Ltd., Caversham, Reading, Berks.

Road work: General Asphalt Co., Ltd., London, S.W.1.

Building work: J. Gerrard & Sons, Ltd., Swinton, Manchester.

Civil engineering work: Tarslag, Ltd., Stockton-on-Tees; Taylor Woodrow Construction, Ltd., Southall, Middx.

General maintenance work: Jesty & Baker, Weymouth; W. Pye, London, S.W.17; Squire W. Swift, Ltd., Selby, Yorks; A. R. Robertson & Co., Blyth; J. H. Metcalf Bros., Doncaster; Carr & Kettlewell, Ltd., Tadcaster, Yorks; Bunting Construction Co., Ltd., London, S.W.1.

¶London (Ministry of Works).—Works contracts placed by M. o. W. P. during week ending December 10:—

London: Bldg. work, Holloway Bros. (London), Ltd., The Priory, Wimbledon Common.

Beds: Bldg. work, Winton Hayes, Ltd., Biggleswade.

Ches: Electrical work, Leyland Construction Co., Ltd., Leyland, Lancs; htg. & H.W.S., G. N. Haden & Sons, Ltd., 4, Albert-sq., Manchester.

Cumberland: Htg. & H.W.S., The Brightside Foundry & Engineering Co., Ltd., 8, Oxford-st., Newcastle-on-Tyne.

Gloucester: Htg. & H.W.S., The Brightside Foundry & Engineering Co., Ltd., 17, Summer-row, Birmingham.

Herefordshire: Electrical work, Parry's Electrical Engineers, 32, Russell-st., Liverpool; Beaven & Sons, Ltd., High Orchard-st., Gloucester.

Mon: Htg. & H.W.S., R. Alger & Sons, Ltd., 160, Dock-st., Newport, Mon; bldg. work, John Morgan (Builders), Ltd., Cardiff.

Shropshire: Bldg. work, Henry Price & Son, Shrewsbury; E. E. Jeavons & Co., Ltd., Tipton.

Staffs: Bldg. work, C. Cornes, Hanley.

Wilts: Bldg. work, Trollope & Colls, Ltd., London.

Worcs: Electrical work, B. French, Ltd., Mill-st., Kidderminster.

¶London (War Dept.).—Works contracts placed by War Dept. for week ended December 5:—

Midlothian: Hutting (erection), Hepburn Bros., Ltd., Edinburgh.

Berwickshire & Roxburghshire: Miscellaneous work, John F. Cobban, Kelso, Roxburghshire.

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Kirkcudbrightshire: Concrete work, Melville Dundas & Whitson, Ltd., Glasgow, C.2.

Lancs: Hutting (erection), John Turner & Son (Preston), Ltd., Preston.

Lincs: Miscellaneous work, G. A. Thurston & Sons, Spalding; G. Barnsdale & Sons, Donington, Nr. Spalding; S. Cartledge & Son, Ltd., Grimsby; H. Dorrington & Son, Gainsborough.

Staffs: Miscellaneous work, Perks & Gould, Ltd., Bilston.

Shropshire: Hutting (erection), Martin Evans, Wrexham; roadwork, The Derby Construction Co., Derby.

Norfolk: Hutting (erection), O. Staines & Son, Swaffham, Norfolk.

Warwickshire: Hutting (erection) & miscellaneous work, Lewis & Watters, Lillington, Leamington Spa; miscellaneous work, Stowe & Co., Ltd., Leamington Spa.

Cardiganshire: Miscellaneous work, Thomas & George, Cardigan.

Northamptonshire: Miscellaneous work, T. Wilson & Son, Ltd., Northampton.

Herefordshire: Miscellaneous work, C. E. Mills, Hereford.

Oxfordshire: Heating work, Ivor Power Specialty Co., Ltd., Kings Langley, Herts.

Essex: Hutting (erection), F. Hutton & Son, Ltd., Colchester; miscellaneous work, T. J. Evers, Tiptree; Stedman Bros., Ilford.

Berks: Hutting (erection), Janes (Builders), Ltd., Slough; building work, A. C. Carter (Oxford), Ltd., Oxford.

Middx: Heating work, R. Crittall & Co., Ltd., London, W.C.2.

Kent: Hutting (erection), E. W. Ballard, Rainham, Kent.

Hampshire: Hutting (erection), Bunting Construction Co., Ltd., London, S.W.1.

Sussex: Hutting (erection), Field & Cox, Brighton; miscellaneous work, Eames & Calverley, Ringmer, Sussex.

Devon: Miscellaneous work, Newton Abbot & District Builders, Newton Abbot.

Co. Antrim: Miscellaneous work, Miskimmin & Sons, Belfast.

Morpeth. — Agricultural implements garage and shed: *W. J. Richardson & Son, Park-st., Hatfield, Herts.

Newcastle-on-Tyne. — Additions to factory: *R. Bowey, 190, Back Raby-st., Heaton, Newcastle-on-Tyne.

Newcastle-on-Tyne.—Works for City Council: Further work at Shotley Bridge Emergency hospital: *Robert Gallacher, Ltd., Blackhill (cost: £301); interior painting at Westgate baths and washhouses: *M. Alexander & Sons, Haymarket-la., Newcastle-on-Tyne, £602.

Nuneaton. — Conversion of properties into flats, for T.C. The Villas, King Edward-rd.: *A. E. Simpson, £235; house: * A. E. Simpson, £270; Attleborough vicarage: *Gudgeon & Sons, £504.

Stockport.—Works for T.C.: Building works for Electricity Dept. L. G. Mouchel & Partners, consulting engineers, Victoria-st., S.W.1: *Simon-Carves, Ltd., Cheadle Heath, Stockport; pram shed at Reddish nursery: *Mark Lane & Co., Ltd., 179, Heaton-la., Stockport.

Stretford.—Works canteen: *D. Anderson & Son, Ltd., Park-rd., Stretford, Manchester.

Stretford.—Office and store: *R. Carlyle & Co., Ltd., Old Trafford, Manchester 16.

West Hartlepool.—Alterations at Dyke House to provide nursery, for T.C.: *T. A. Young, Hart Station.

Boyle's Patent "Air-Pump" Ventilator
OVER TWO MILLION IN USE
ROBERT BOYLE & SON,
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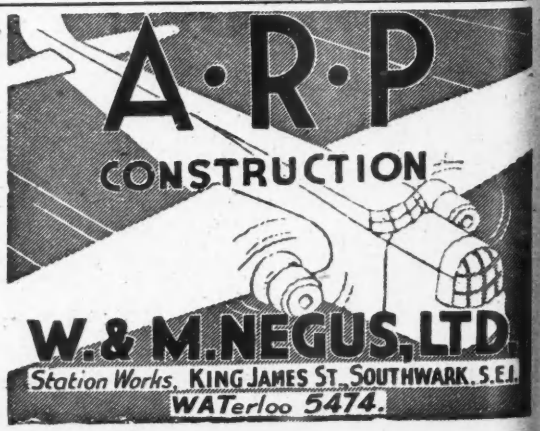
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